DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: UTU-065915

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: KNOCKDHU UNIT 75040X

8. FARM OR LEASE NAME: KNOCKDHU UNIT

2. NAME OF OPERATOR: PETRAL EXPLORATION, LLC C/O MCILNAY & ASSOCIATES, INC

9. WELL NO.: 2

3. ADDRESS OF OPERATOR: 2305 OXFORD LANE CASPER WY 82604

10. FIELD AND POOL, OR WILDCAT: UNNAMED

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface: (SE NW SE) 1950'FSL 1573' FEL Sec. 33-T37S-R25E
At proposed prod. zone: Same

CONFIDENTIAL

RECEIVED
AUG 02 1996
DIV OF OIL, GAS & MINING

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 33-T37S-R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 18 Miles SE from Blanding, Utah

12. COUNTY OR PARISH: San Juan | 13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): Lease 671' Unit 671'

16. NO. OF ACRES IN LEASE: Lease 280 Acres Unit 600 Acres

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: Lease -N/A UNit- 2539'

19. PROPOSED DEPTH: 5850'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5424' GL 5432' KB

22. APPROX. DATE WORK WILL START*: September 1, 1996

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	¼" Wl. thick	80'	To surface
12¼"	85/8"	24#/ft.	1650'	To surface
77/8"	5½"	15.5#/ft.	5850'	220 sx

Request is made for all information to be held CONFIDENTIAL.

It is proposed to drill a well at the above location with the primary zone of interest the Upper Ismay Mound formation at 5510' TVD. If the well proves productive, 5½" casing will be cemented in place and the well completed. If the well is found non-productive, it will be plugged and abandoned and the surface restored as per BLM specificaitons.

See attached "Drilling Program" summary and "Surface Use Program" for details

I hereby certify that Petral Exploration LLC is responsible under the terms and conditions of the lease to conduct lease operations in conjunction with the application. Bond coverage pursuant to 43 CFR 3104 for lease activities is provided by BLM bond No. UT 1040.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Anthony R. Mayer TITLE Petral Exploration, LLC, Petroro Corp., Manage Anthony R. Mayer, Sr VP DATE July 28, 1996

(This space for Federal or State office use)

PERMIT NO. 43-037-31779 APPROVAL DATE

APPROVED BY J.R. Matthews TITLE Petroleum Engineer DATE 8/27/96

CONDITIONS OF APPROVAL, IF ANY:

CONFIDENTIAL

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Utah State Office
324 South State, Suite 301
Salt Lake City, Utah 84111-2303

RECEIVED
NOV 10 1995

IN REPLY REFER TO:
3104
(UT-923)

NOV 7 1995

DECISION

Obligor Petral Exploration LLC P.O. Box 5083 Denver, CO 80217-5083	Bond Amount:	$25,000
	Bond Type:	Statewide Oil and Gas
Financial Institution: Norwest Bank Colorado, N.A. 1740 Broadway Denver, CO 80274	BLM Bond Number:	UT 1040

Statewide Oil and Gas Personal Bond and Certificate of Deposit Accepted

On November 6, 1995, this office received Bond Form 3000-4 together with Investment Deposit Agreement (Book Entry) No. 101741006 evidencing the purchase of a $25,000 Certificate of Deposit (CD) in the amount of $25,000 to secure a statewide oil and gas bond for the above obligor. Both documents have been examined and are accepted effective November 6, 1995.

The CD will be retained by the Bureau of Land Management (BLM) and will automatically renew annually until all terms and conditions of the leases have been fulfilled or until a satisfactory replacement bond has been accepted by the BLM.

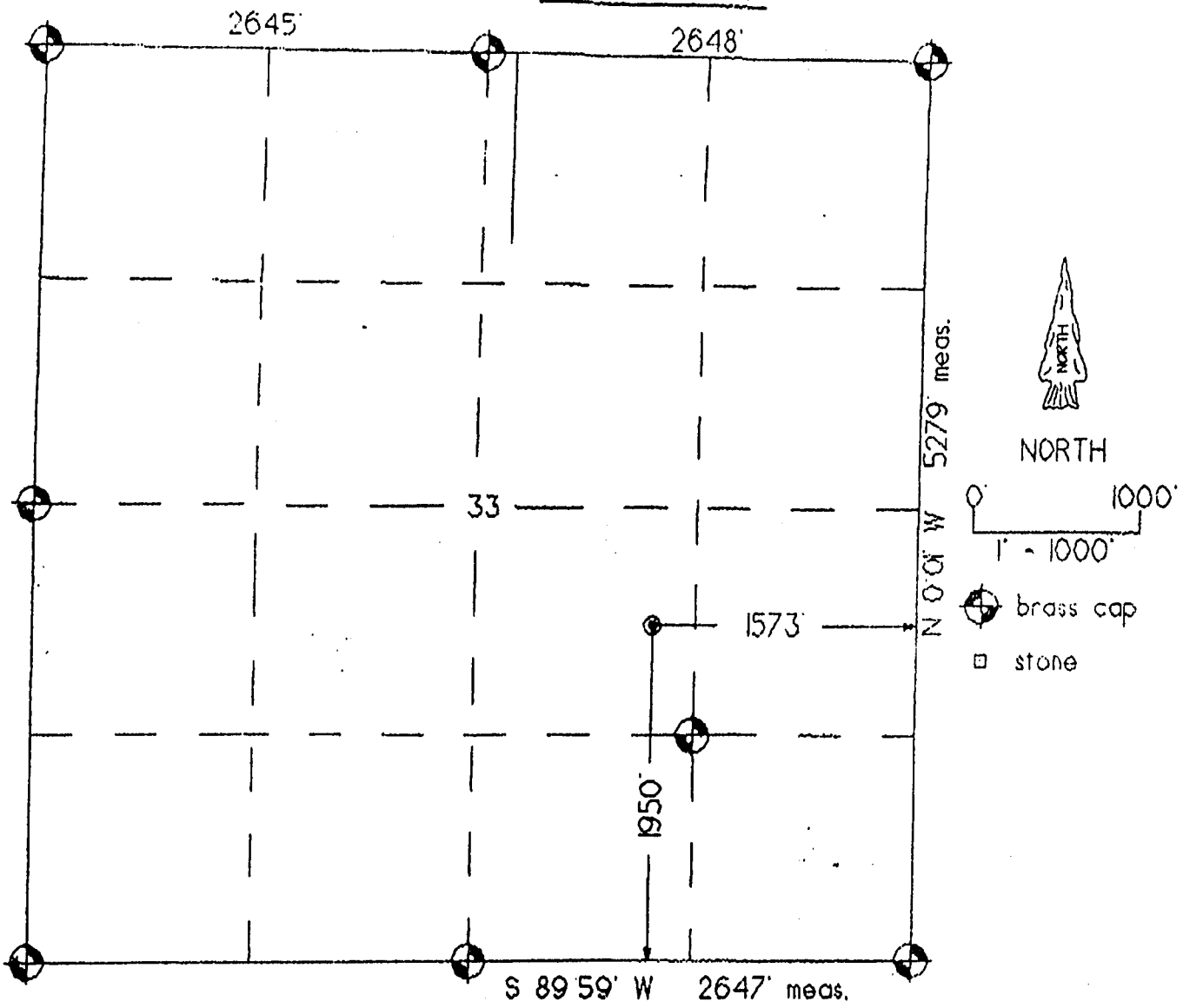
The bond will be maintained by this office. The bond constitutes coverage of all operations conducted by or on behalf of the obligor on Federal leases in the State of Utah. The bond provides coverage of the obligor where that obligor has interest in, and/or responsibility for operations on, leases issued under the authority of any of the Acts cited on the bond form. Please note that Federal leases do not include Indian leases.

If you have any questions, please contact Irene Anderson of this office at (801) 539-4108.

Robert Lopez
Chief, Branch of Mineral
Leasing Adjudication

cc: All Districts

Well Location Plat



Well Location Description

PETRAL EXPLORATION
2 Knockdhu Unit
1950'FSL. & 1573'FEL.
Section 33. T.37 S.. R.25 E.. SLM
San Juan County. UT
5424' grd. el. from seismic
320.925 N & 2.674.703 E from siesmic
320.921 N & 2.674.700 E from GPS

REGISTERED LAND SURVEYOR
GERALD G. HUDDLESTON
No. 181297
STATE OF UTAH

19 July 1996

Gerald G. Huddleston. LS

The above is true and correct to my knowledge and belief.

HUDDLESTON LAND SURVEYING - BOX KK - CORTEZ. CO - (970) 565 -3330

DRILLING PROGRAM

Petral Exploration, LLC
#2 Knockdhu Unit
2110' FSL & 1640' FEL (NE NW SE) Sec. 33-T37S-R25E
Lease # UTU 065915
Unit # UTU 75040X
San Juan Co., UT

A. Surface Formation:
Morrison

B. Estimated Formation Tops: - (KB Measurements)

Formation	TVD Depth (KB)	
Morrison	Spud	
Entrada	665	
Navajo	859	
Wingate	1350	
Chinle	1561	
Shinarump	2361	
Cutler	2557	
Honaker Trail	4445	
La Sal	5190	
Upper Ismay	5497	
Upper Ismay massive anhydrite	Absent	
Upper Ismay mound	5510	
Hovenweep Shale	5605	
Lower Ismay	5635	
Lower Ismay anhydrite	5655	
Lower Ismay carbonate	5682	
Gothic Shale	5692	
Upper Desert Creek	5698	
Upper Desert Creek anhydrite	5704	
Lower Desert Creek	5738	
Lower Desert Creek anhydrite	5752	
Lower Desert Creek mound	5758	
Sub-mound	5793	
Chimney Rock Shale	5801	
Akah	5822	
TOTAL DEPTH	5850	
Salt	5852	DO NOT PENETRATE

C. Estimated Depths at which Anticipated Water, Oil, Gas or other Mineral-Bearing Formations are Expected to be Encountered:

Hydrocarbon bearing zones may be found from 5510' (Upper Ismay mound) to 5,850'. Commercial water zones are not anticipated. All formations below surface may contain water. Fresh water zones will be protected through casing and cementing programs (see parts E & F).

D. Minimum Pressure Control Equipment & Auxiliary Equipment: (see attached diagram)

1. One 11" - 3000 psig annular preventer. One 11" - 3000 psig double ram blowout preventor with blind rams and one set of 4 1/2" drill pipe rams (above blind ram) will be installed and utilized prior to drilling below 8 5/8" surface csg. Flow sensor and PVT will be installed prior to drilling below surface casing and utilized to T.D.

2. Blowout preventor or drilling spool will be equipped with one 3" and one 2" side outlet.

3. A 3000 psig choke manifold with two (2) adjustable chokes will be installed prior to drilling below surface casing. The choke line will be as straight as possible and turns, if required, will have a targeted T block.

4. An accumulator rated at 3000 psig W.P. with a minimum of three (3) hydraulic control stations will be utilized. One for annular, one for blind rams and one for pipe rams. Remote controls will be located at the accumulator house at G.L. and on the floor. Manual controls (e.g. hand wheels) will be located at G.L. under the substructure. A valve shall be installed in the hydraulic closing line to serve as a locking device when the accumulator system is inoperative.

5. Pressure testing procedures and requirements. Prior to drilling out below the 9 5/8" surface casing, surface casing will be tested to 2065 psig (70% of minimum internal yield of the 8 5/8", 24#/ft., K-55 surface casing) for a minimum of 5 min. BOP stack and associated equipment (e.g., choke manifold, lower and upper kelly cocks, valves, etc.) will be tested to 3000 psig for 15 min. utilizing a test plug. The annular preventor will be tested to 1500 psig for 15 m. Certified BOP testing service company will be utilized for pressure testing. All pressure testing operations must be witnessed by Petral's well site representative (McIlnay & Associates, Inc.).

6. Drilling contractor will perform a daily operational check of all BOP equipment (e.g. includes associated equipment). Pipe and blind rams shall be activated each trip.

7. All BOP pressure testing and operational check will be recorded in the daily "Tour" book.

8. A BOP and pit level drill will be conducted by the drilling contractor weekly and noted in the "tour" report book.

9. 24 hours prior to pressure testing notify the BLM, and Utah Division of Oil, Gas & Mining.

Every 30 days BOP and accessory equipment must be pressure tested to 2500 psig. Notify the BLM and Utah Division of Oil, Gas & Mining prior to test.

E. Casing Program:

Conductor Casing:
80' of 16" pipe cemented in place to surface.

Surface Casing:
42 Jts. - 1650', 8 5/8, 24 #/ft, J-55 , ST&C, "A" Grade (new).

Accessory Equipment
1 - 8 5/8" Guide Shoe
1 - 8 5/8" Insert Float installed lst joint above shoe.
1 - 8 5/8" Centralizer placed middle of shoe joint.
1 - 8 5/8" Centralizer on 2nd collar above shoe.
3 - 8 5/8" Centralizer thereafter on every 4th collar for 3 centralizers.
5 - 8 5/8" Centralizer thereafter on every 6th collar for 5 centralizers.
1 - 8 5/8" Centralizer placed 3rd collar from surface.
11 Total Centralizers

Production Casing (New):

Interval	Net-Ft.	Gross-Ft.	Specifications
0 - 5,850'	5,850'	5,908'	5 1/2", 15.5#/ft., J or K-55, ST&C or LT&C, New

Accessory Equipment
To be determined at time of need.

Testing Procedure:
At time of BOP testing and prior to drilling out, surface casing will be tested to 70% of burst pressure for new 8 5/8", 24#/ft., J-55 casing (2065 psig). Production casing will be pressure tested to a minimum of 3000 psig prior to commencement of completion.

F. Cementing Program: Check water quality for all cementing slurries.

Conductor: Cement to surface.

surface - 100% excess.)

Lead Slurry: 500 sks. Halliburton Light Std. (70) w/2% $CaCl_2$ & ¼#/sk. Flocele
Slurry yield - 1.95 CF/sk

Tail Slurry: 160 sks. Class "G" cement w/2% $CaCl_2$ & ¼#/sk. Flocele
Slurry yield - 1.19 CF/sk

Note: If cement does not circulate to surface, utilize 1" to bring to surface.

Production Casing: (Cemented minimum of 1000' fillup above potential pay zone(s))
Preflush: 10 Bbls. fresh water
20 Bbls. mud flush (or equivalent)

Scavenger:
50 sks. Pozmix A (70)

Primary Slurry: 220 sks. Std. Pozmix A (70), w/0.5% Micro Bond M, 2% Halliburton Gel, 0.5% Halad 344 & 1/4#/sk. Flocele.

Note: Slurry volume to be recalculated based on hole caliper and number and depth of zones. 25% excess and 7 7/8" hole used for initial calculations.

G. Drilling Fluids:

Depth	0 - 1650'	1650' - 4400'	4400' - 5650'	5650' - T.D.
Wt. - #/gal	8.4 -8.9	8.4 - 8.9	*1 8.6 - 10+	*5 9 -12+
Vis. - sec.qt.	27 - 40	30 - 35	*2 34 - 40	*2 34 - 40
WL - cc	NC	NC	*3 10 Max	8 - 10
Ph	NC	NC	*4 9.0 - 10	9.5
PV/YP	--	--	6-10/8-16	6-10/8-16
Gels (sec/ min)	--	--	1-4/3-9	1-4/3-9
Type System	FWG	FWG/SDF 2000 Sweeps	LSND	LSND

*1 Drill Upper Ismay mound with as low a mud weight that can be achieved. May require weighting up to kill water flows. If required to weight up for water flow, pretreat mud w/10 sks. of Magmafiber loss circulation material prior to drilling or coring the Upper Ismay Mound.

*2 Recommended Viscosity:
Coring - 42-44 sec./qt.

Logging - 30 sec./qt.
DST's - 42-44 sec./qt.

*3 Prior to penetrating the Upper Ismay mound.

*4 Raise Ph to 10 prior to drilling anhydrites.

*5 Lower Desert Creek may be overpressured and require a weighted mud system.

*6 Prior to penetrating the Upper Ismay Mound @ 5510' or the Lower Desert Creek Mound add 100 ppm nitrates to the mud system.

Sufficient mud materials to maintain mud requirements and meet minor lost circulation and blowout problems will be on the wellsite. The pits will be monitored on trips to assure that the hole is kept full while tripping the drilling string. A pit volume totalizer (PVT), stroke counter & flow sensor will be utilized below the surface casing setting depth to T.D.

H. Coring, Testing, Logging and Tentative Completion Program:

1. One 60' core and one shorter core of Upper Ismay mound at estimated depth of 5,510' TVD. One 60' core is to be taken in the Lower Desert Creek at estimated depth of 5,758' TVD.
   On site geologist to pick core point and samples for analyses.

2. Drill stem tests will be at the discretion of the operator and will be based on shows, logs, hole conditions, etc.

3. If a completion attempt is to be made, 5 1/2" casing will be cemented into place. The following presents a summary of tentative completion procedures.
   a. Perforate pay zones with approximately 4 shots/ft.
   b. Perforations may be stimulated w/HCl acid.
   c. A Sundry Notice will be filed with the final completion plan.

   Note: All perforations and the size of stimulation jobs are tentative and final design will be based on electric logs, cores, and drill stem test data.

4. Logging:
   GR-AIT - Base surface casing to T.D.
   GR-BHCS (long spaced integrated) w/Cal - Base surface casing to T.D.
   GR-FDC-CNL-w/PE (min.) - Base surface casing to T.D.
   SHDT (high resolution stratigraphic dipmeter, 6 arm) - Lower 800' of hole or minimum run.

5. Samples:
   30' samples from 1,650' - 4,200'
   10' samples 4,200' to TD

bags in 100' depth groups to dry. Store in a clean, dry place. Sample depth intervals may be changed at the discretion of the geologist.

I. Abnormal Conditions or Potential Hazards:

Potential problems include possible water flows to 5,200'; abnormal pressure in Lower Desert Creek Carbonate (3500 psig); lost circulation and seepage, surface to TD w/possible differential sticking. Estimated temperature at T.D. 140 F. Hydrogen sulfide gas is not anticipated.

J. Auxiliary Equipment Required: See Paragraph D.

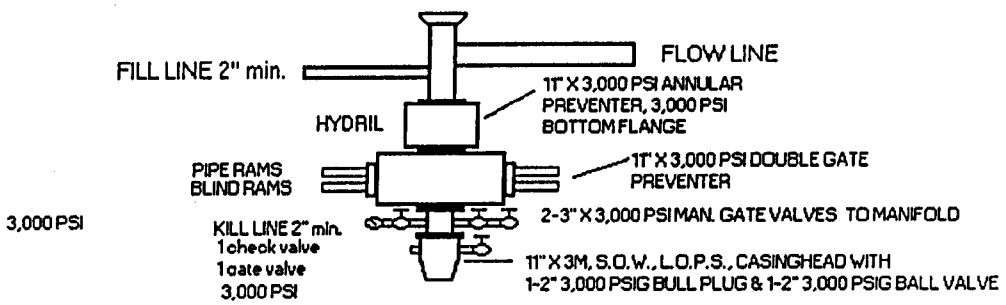
K. Anticipated Starting Date of Drilling Operations:

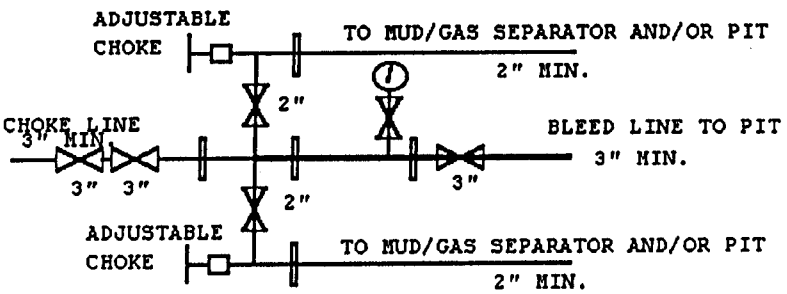
Plan to start drilling September 1, 1996. 15 days should be required to drill, test, log and set casing.

L. Additional Considerations:

None.

BOP EQUIPMENT
3,000 PSIG W.P.





3,000 PSI CHOKE MANIFOLD

Petral Exploration, LLC
#2 Knockdhu Unit
2110' FSL & 1640' FEL (SE NW SE) Sec. 33-T37S-R25E
Lease # UTU 065915
Unit # UTU-75040X
San Juan Co., UT

A. Existing Roads

1. To visit the wellsite, proceed south for 1 mile from the Comfort Inn in Blanding, Utah and turn left at Ameri-Gas on 700 E Brown Canyon Road. Continue 1 mile to County Road #206 and turn right. Stay on Co. 206 for 8.5 miles (keep to left at fork) and go an additional 14 miles (total of 22.5 miles on Co. 206) to the old compressor station at the Montezuma Canyon Road. Go straight ahead about 100yds. At the "Y" take the left fork. Go 1/8 mi. and turn left. Go across the creek and through the farm. Go about 3.3 miles to the Patterson #1 well. 500 ft. beyond the Patterson #1 go north on the lease road (the county road swings to the right here). Go about 1.4 miles to the Patterson "A" Battery. Turn right and go about 1/2 mile east. Turn left and go about 1/8 mile to the location.

2. Existing roads are paved, gravel or dirt and are suitable for heavy loads. Existing roads, excluding those maintained by the State or County, will be maintained in the same or better condition. Petral will participate in any cooperative agreement that currently exists, or might be required in the future, to improve and maintain the existing roads. The access road will not cross Indian lands. With the exception of State or County maintained roads, the existing roads are on Bureau of Land Management and land owned by Redburn Flying R Ranch.

3. Proposed wellsite and access roads: See Figures 1 - 3.

B. Access Roads to be Constructed or Reconstructed:
See Figure 2. The last 1/8 mile to the location will be on the access road to the #1 Knockdhu. This road has been upgraded and graveled as needed to service production at the #1 Knockdhu Unit.

C. Existing Wells within a One-Mile Radius: (See Figure 2)

1. Water Wells: None
2. Injection Wells: None
3. Abandoned Wells: One

5. Producing Wells: Two.

6. Drilling Wells: None

D. Location of Existing and/or Proposed Facilities if Well is Productive:

1. Facilities Required in the Event of Production on Well Pad:

   a. Location of Facilities:
   See Figure 5 for location of facilities. All facilities will be on the wellsite pad. Production facilities (including dikes) will be placed on the cut portion of the location (Figure 5).

   b. Dimension of Facilities:
   Production pad a maximum of 165' x 310' (See Figure 5). A heater treater will be located approximately 130' north of the well. Two 300 or 400 bbl. oil storage tanks will be located approximately 40' east of the heater treater and 120' northeast of the well. The dikes for the production facilities will be constructed of compacted subsoil, hold 1 1/2 times the capacity of the largest tank, and be independent of the back cut. That portion of the drilling pad that is not needed for production will be rehabilitated.

2. Facilities Required off Well Pad in the Event of Production:
   Upgrade and maintain access roads as necessary to prevent soil erosion and accommodate year-around traffic.

E. Location and Type of Water Supply: (See figure 1)

1. The water will be trucked from artesian wells located in Section 1-T38S-R24E. Permits will be obtained from the State Engineer.

2. The water source is not located on State land. Water will not be obtained from Indian projects.

3. A water well will not be drilled.

F. Construction Materials:

1. Native soil will be utilized in the drilling site and access road. Newly built access road will be graveled with pit run gravel if a producing well is obtained. Additional gravel

productive.

2. No construction material from Indian lands.

3. Crushed rock, if necessary, will be purchased from construction contractors in the area from existing gravel pits and hauled over access roads shown on Figures 1 & 2.

G. Methods for Handling Waste Disposal:

1. Cuttings:
Reserve pit 75' x 125' x 10' (3:1 slope) fenced on three sides during drilling operations. The pit will be lined with 24 tons of bentonite worked in with a cat. The fourth side will be fenced when the rig moves out (See Figures 3-6).

2. Drilling Fluids:
Reserve pit 75' x 125' x 10' (See figures 3 & 4). The reserve pit will be constructed to prevent the collection of surface runoff.

3. Produced Fluids:
   a. Recovered during drill-stem tests will be disposed of in a test tank.
   b. During completion, produced fluids will be contained in swab tanks (See Figure 6).
   c. Water disposal will be provided in accordance with BLM regulation NTL-2B.

4. Sewage:
Porta potty with tank or portable sewage treatment plant (i.e. On Site Sewage Treatment, Inc.) capacity of 700 gal/day of treated water disposed of into reserve pit. Any other sewage will be removed from the location by a commercial service. Closed septic tank may be used for the camp trailer.

5. Garbage and Trash:
   a. An enclosed trash bin will be utilized.
   b. Engine oil and lubricants will be collected in containers.

6. Clean-up of Wellsite Area after Rig is removed:
   a. Trash will be carried off site for disposal.
   b. All pits and wellsite will be covered, leveled and reseeded as per BLM instructions.

H. Ancillary Facilities: None.

I. Wellsite Layout:

1. Cross section: See Figure 3 for elevations and cross section. Maximum cut is approximately 13' at the northwest corner of the reserve pit and at the northwest corner of the drilling pad. Maximum fill is 6' at the southeast corner of the drilling pad.

2. Orientation of rig, pits and associated equipment (See Figure 4).

3. Six inches of topsoil will be removed from the location (drilling pad) including areas of cut and fill. Soil will be stockpiled adjacent to the wellsite pad (See Fig.3).

4. Access road, living facilities, parking area, etc. (See Figure 4).

J. Plans for Restoration of Surface:

1. All pits will be backfilled, leveled and contoured to as near the current condition as is practical.

2. Revegetation and rehabilitation of the wellsite and access road as per BLM specifications.

3. All pits will be fenced until dry and then backfilled.

4. If oil is present on the reserve pit, overhead flagging will be installed.

5. Rehabilitation will be commenced when the rig moves out with the location restored by Fall, 1996. Complete fall seeding after September, 1996 and prior to ground frost. Rehabilitation will be completed by November 1, 1997.

K. Surface Ownership:

1. Access roads:
   See Figures 1 & 2 Bureau of Land Management (on lease) and Redburn's Flying R Ranch. An easement has been obtained from Redburn's Flying R Ranch across portions of Section 33-T37S-R25E.

2. Well Location:
   Bureau of Land Management - See Figures 1 & 2.

L. Other Information:

1. a. BLM to be notified 48 hours prior to starting dirtwork.
   b. Wellsite and access road are located in arid, sandy, hilly terrain.
   c. Soil is shallow, sandy, and silty.
   d. Vegetation consists of very sparse native grasses and sparse sagebrush, and small trees.
   e. The area is a natural habitat for wildlife (i.e., deer, antelope, rabbits, etc.).

2. Livestock were grazing in the area when the wellsite was visited.

3. a. Intermittent streams (i.e., flow during wet seasons of the year) do exist in the area

b. There are no occupied buildings within one mile of the proposed wellsite.

c. Historical, cultural and archeological survey has been conducted by 4 Corners Archeological Services. No cultural or archaeological evidence was discovered in the area of the access road and wellsite.

M. Lessee's or Operators Representative and Certification:

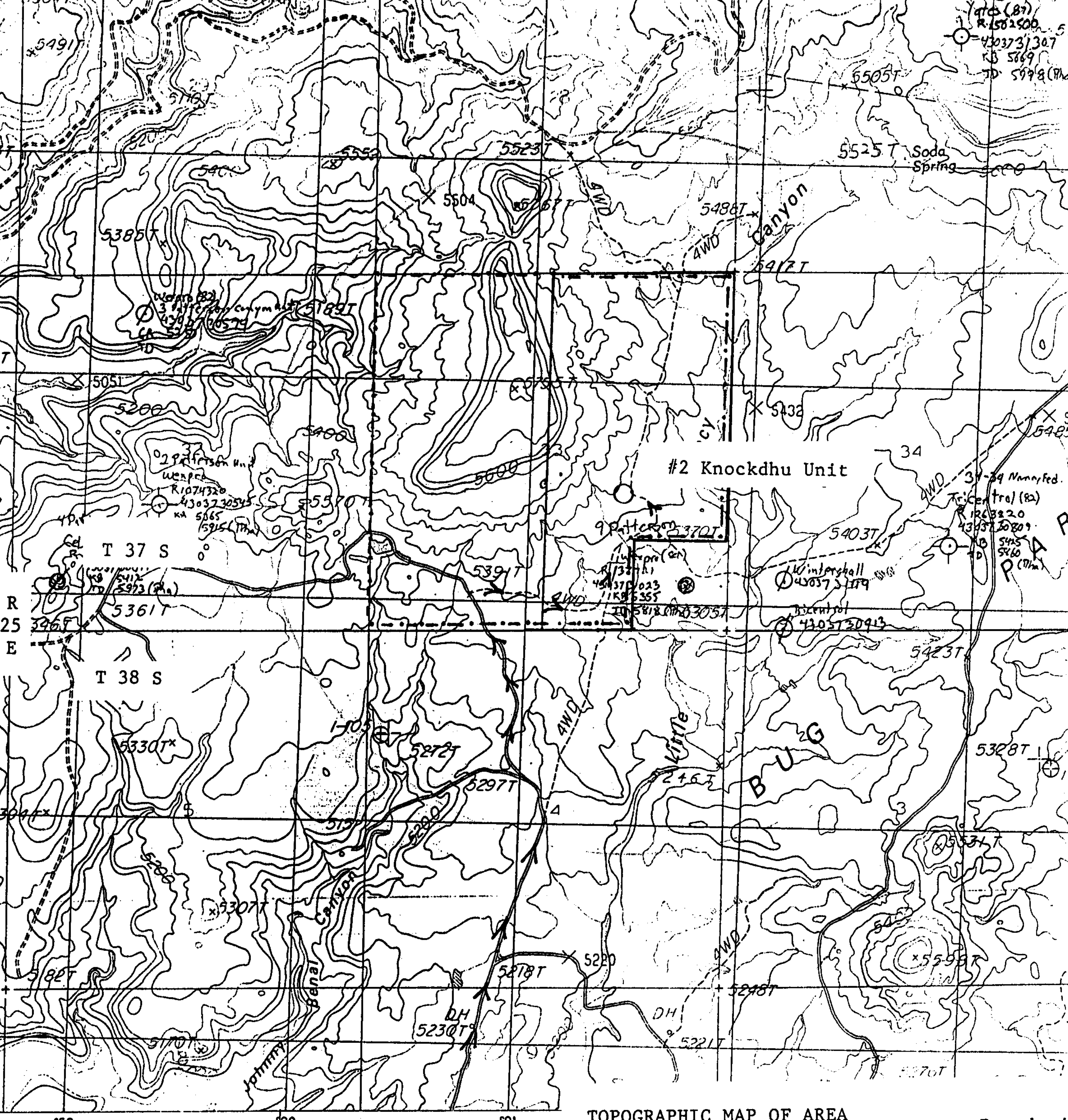
Operator
Petral Exploration, LLC----------(303) 832-3131
P. O. Box 5083
Denver, CO 80202

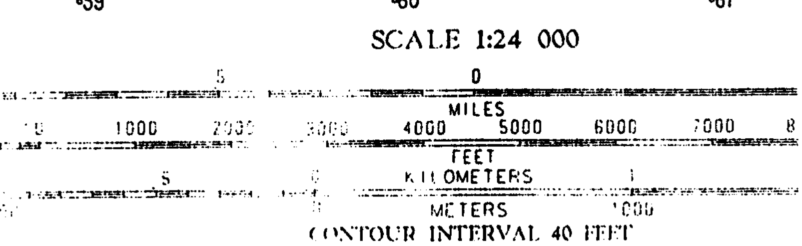
Representative
McIlnay & Associates, Inc.----------(307) 265-4351
2305 Oxford Lane
Casper, WY 82604

I hereby certify that I or persons under my direct supervision, have inspected the proposed drillsite and access route, that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by Petral Exploration, LLC and its' contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

7/29/96
Date

Petral Exploration, LLC, Petroro Corp., Manager
Anthony R. Mayer, Sr. VP





TOPOGRAPHIC MAP OF AREA

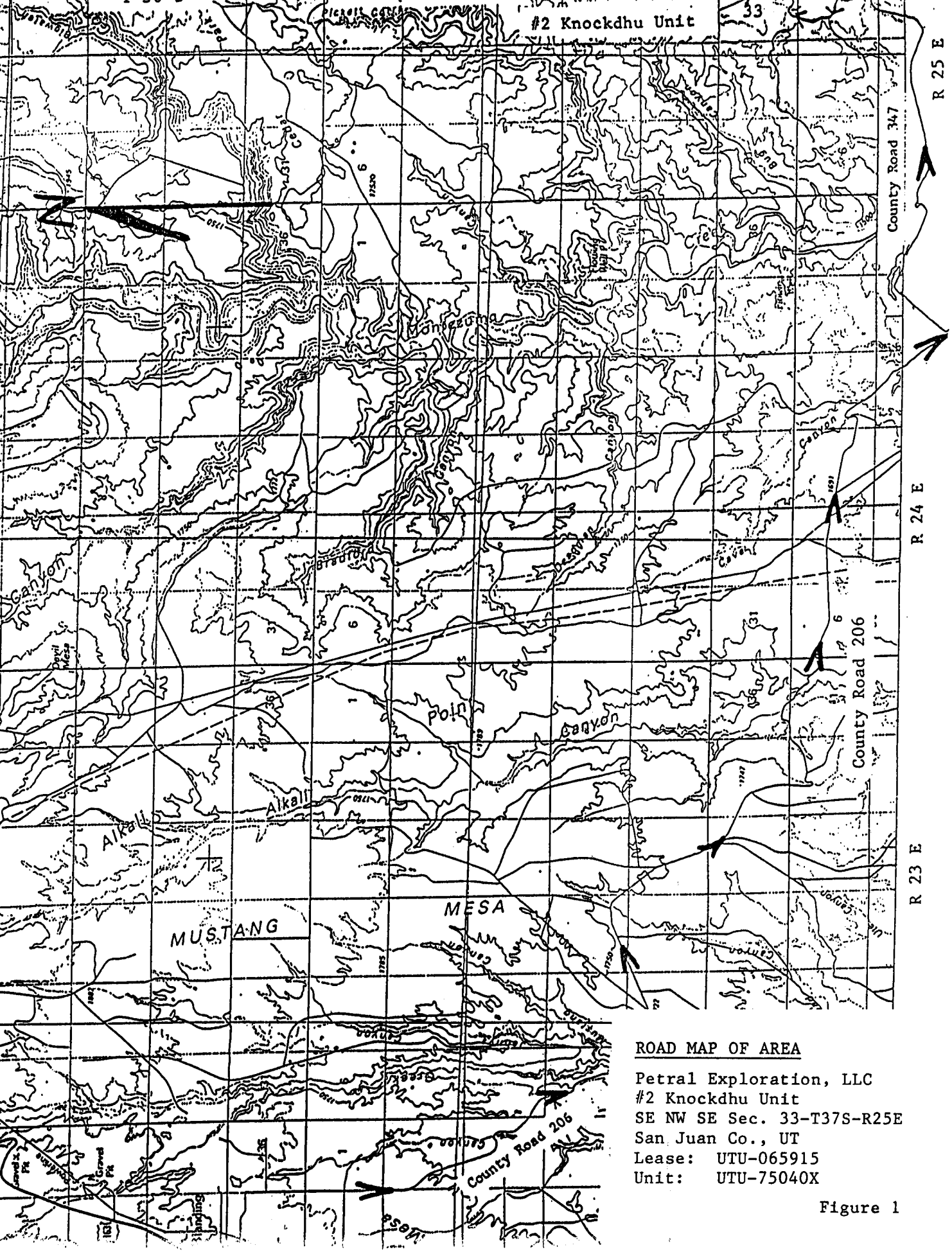
Petral Exploration, LLC
#2 Knockdhu Unit
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT
Lease: UTU-065915
Unit: UTU-75040X

Boundarie

Lease

Unit

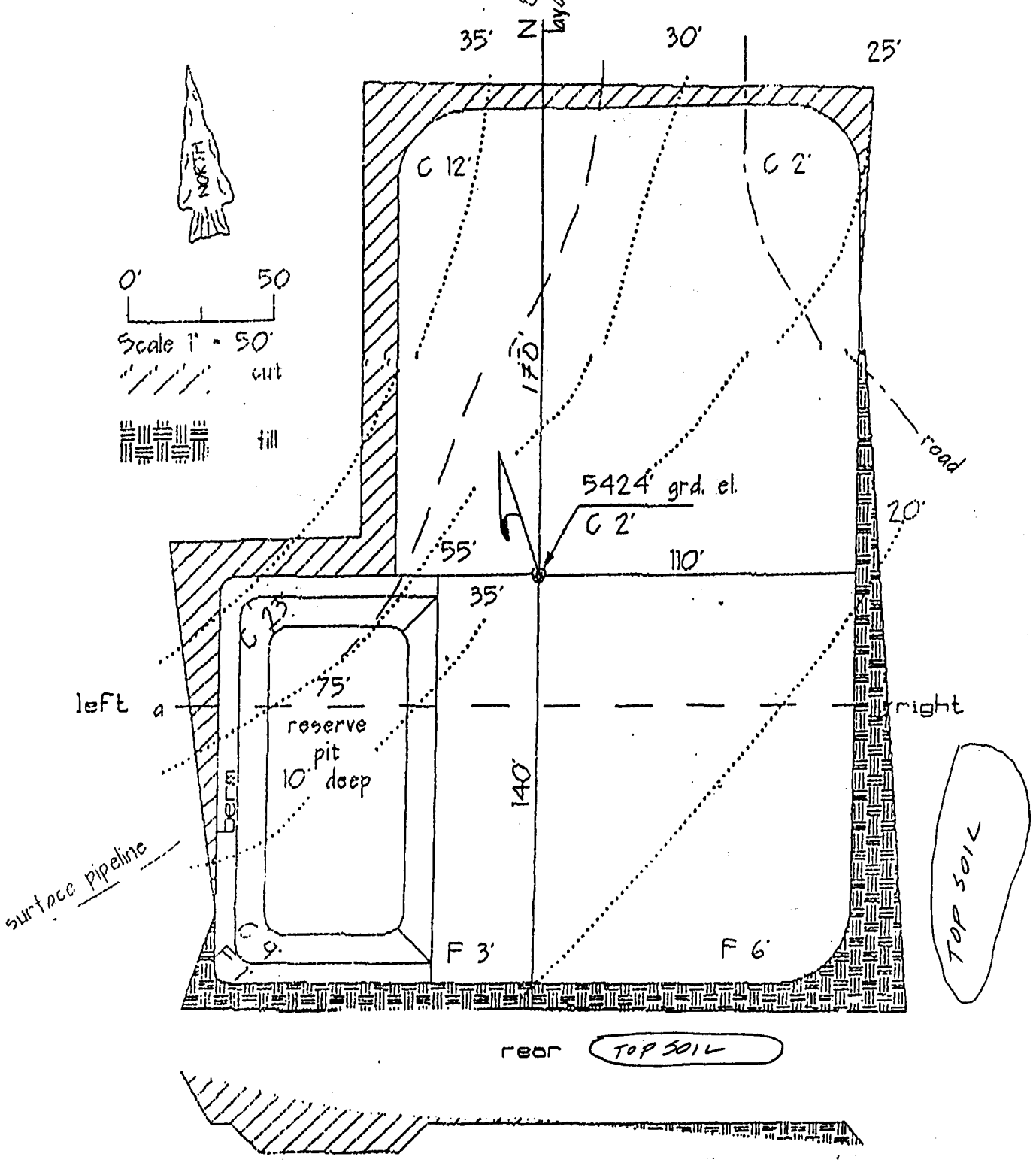
Figure 2



ROAD MAP OF AREA

Petral Exploration, LLC
#2 Knockdhu Unit
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT
Lease: UTU-065915
Unit: UTU-75040X

Figure 1



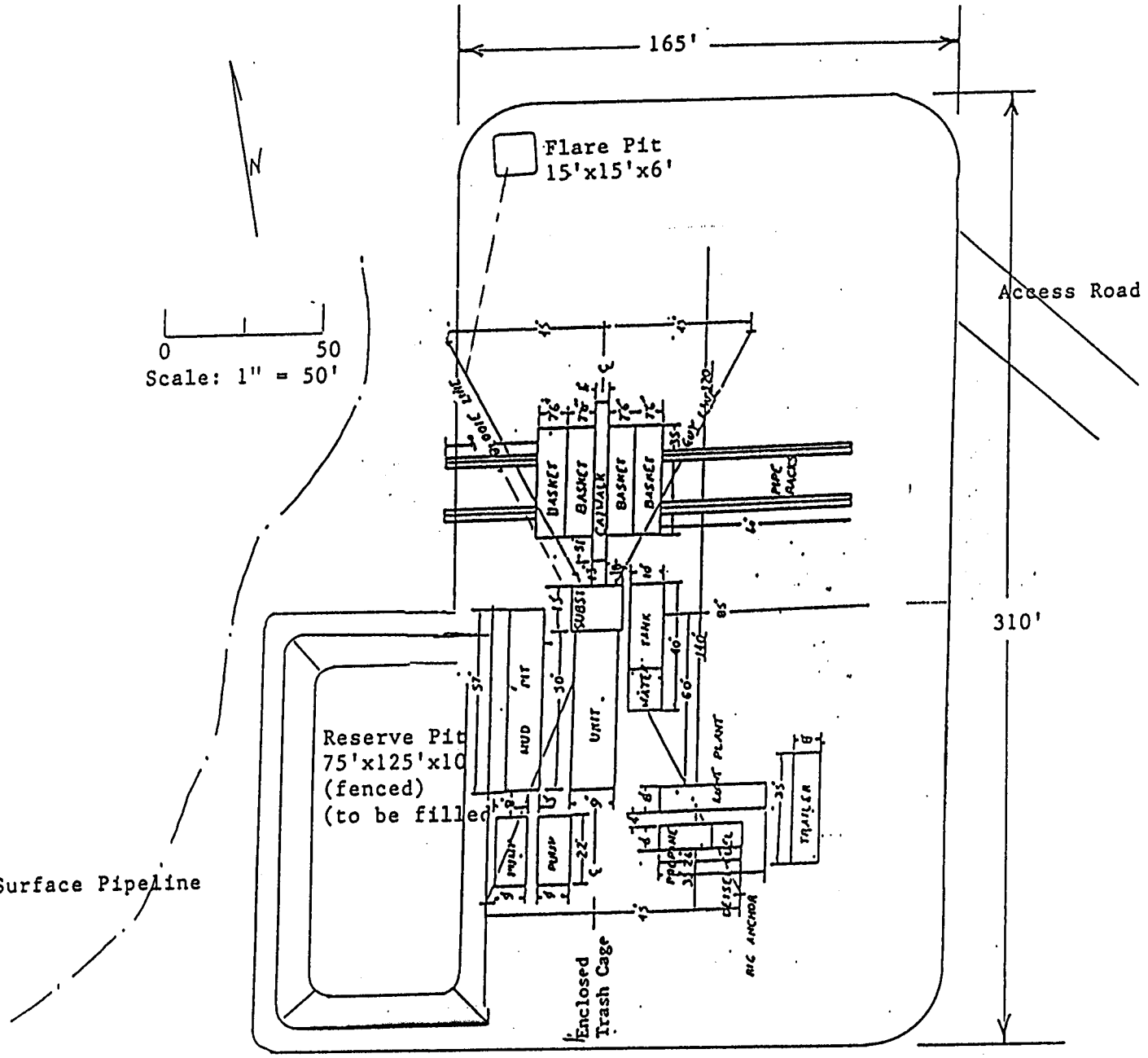
a

Cross section

PAD & PIT LAYOUT

Petral Exploration, LLC
#2 Knockdhu Unit
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT
Lease: UTU-065915
Unit: UTU-75040X

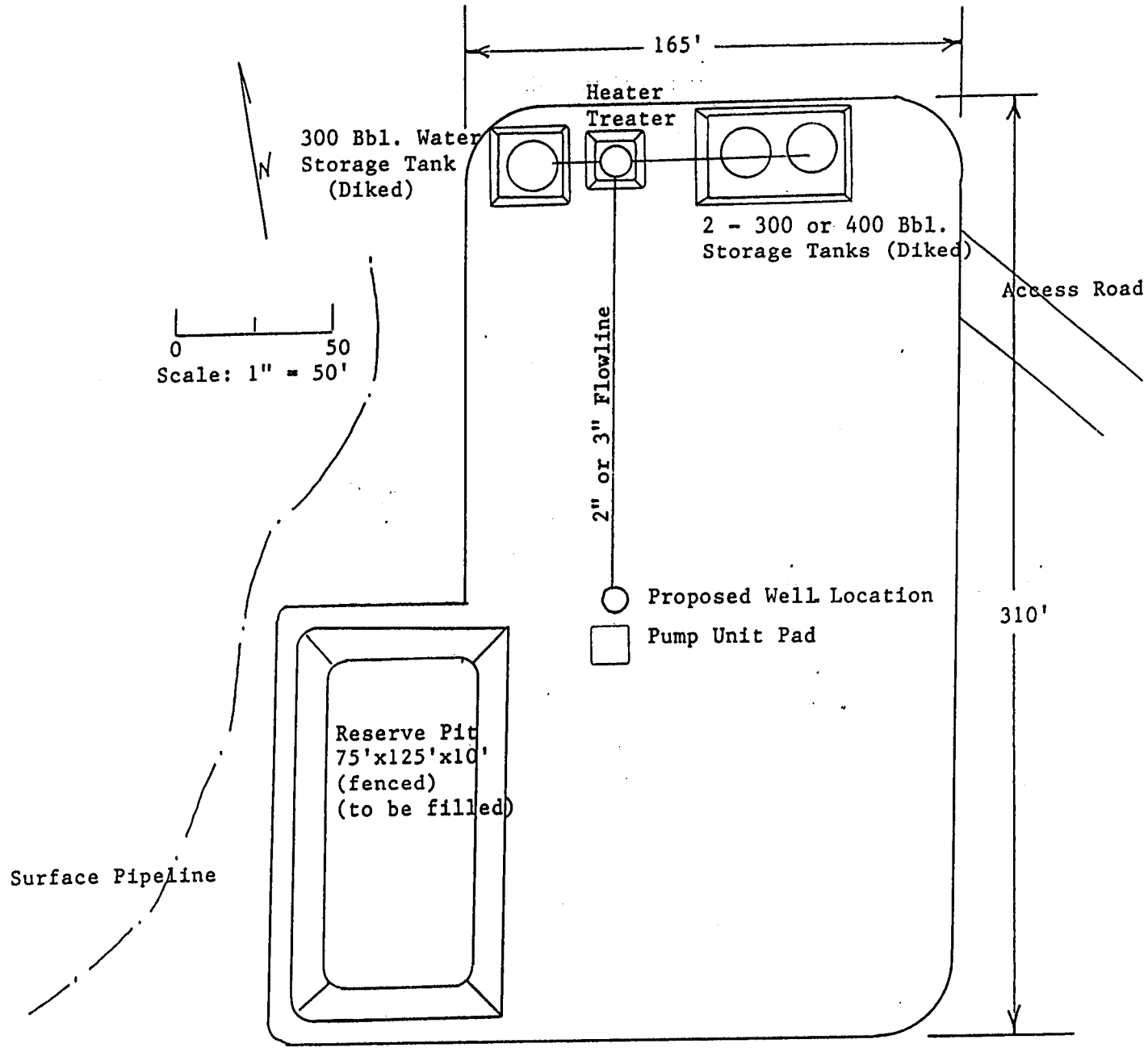
Figure 3



RIG LAYOUT

Petral Exploration, LLC
#2 Knockdhu Unit
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT
Lease: UTU-065915
Unit: UTU-75040X

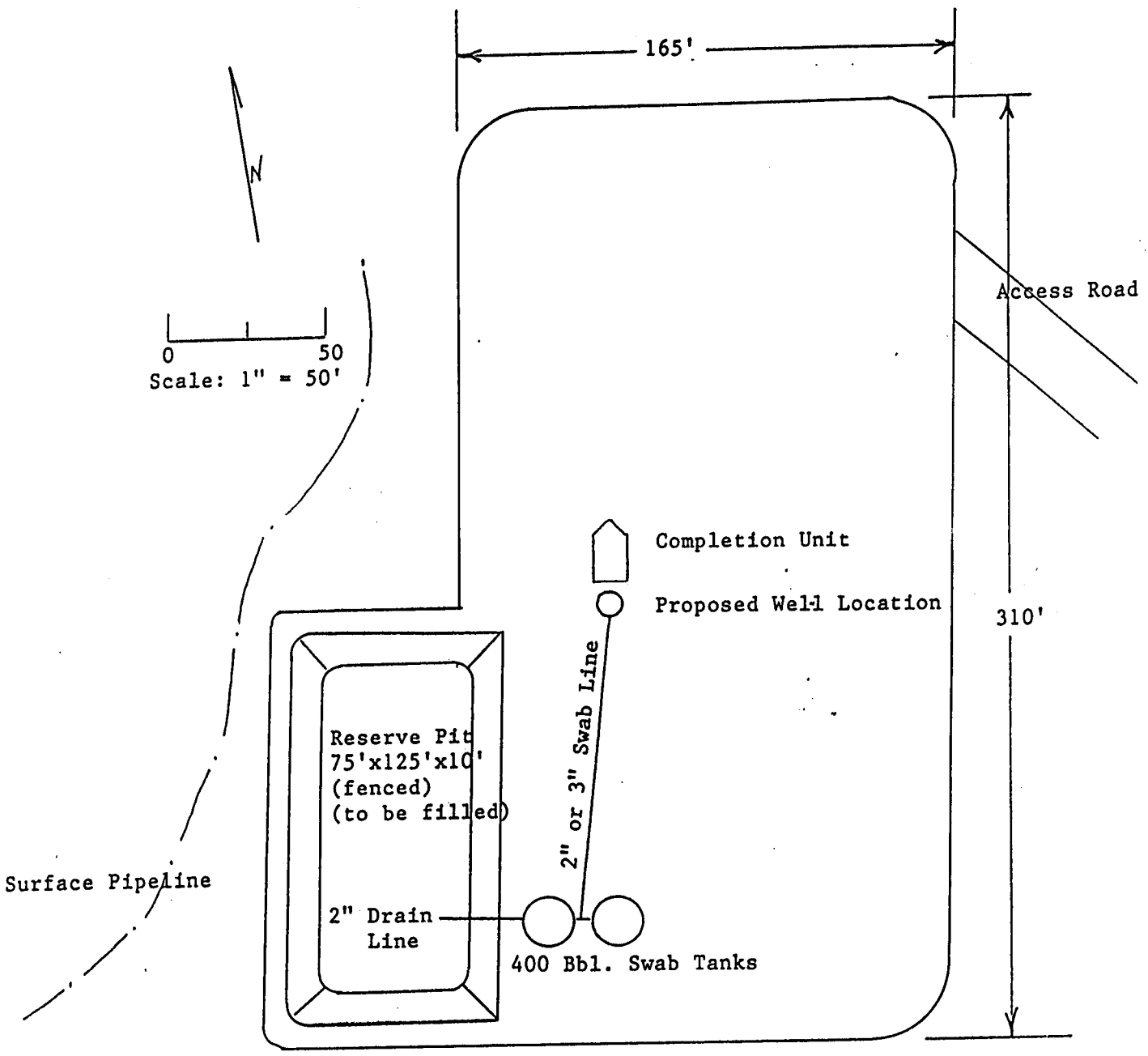
Figure 4



PRODUCTION FACILITIES

Petral Exploration, LLC
#2 Knockdhu Unit
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT
Lease: UTU-065915
Unit: UTU-75040X

Figure 5



COMPLETION LAYOUT

Petral Exploration, LLC
#2 Knockdhu Unit
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT
Lease: UTU-065915
Unit: UTU-75040X

Figure 6

KNOW ALL MEN BY THESE PRESENTS:

THAT, Marvin Redburn and Patricia Redburn, husband and wife, of 26102 Hwy 145, Dolores, Colorado 81323, hereinafter designated "Grantor", for and in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration in hand paid by Petral Exploration LLC, of P.O. Box 5083, Denver, Colorado 80202, the receipt of which is hereby acknowledged, Does hereby GRANT and CONVEY unto Petral Exploration LLC, its successors and assigns, an easement for the right to construct, operate, use and maintain a roadway across the following described land and premises situated in the County of San Juan, State of Utah, to-wit:

Township 37 South, Range 25 East
Section 33: S1/2SW1/4, SW1/4SE1/4

The Right of Way and Easement shall make use of the existing 4WD Trail as set out on the attached plat, attached hereto as Exhibit "A" and made a part hereof.

Petral Exploration, LLC, including its employees, licensees and invitees, hereinafter collectively designated as "Grantee", its successors and assigns shall have full, free and exclusive right and privilege, to travel upon, pass and repass along, and use said road in any lawful manner, including the transportation of persons, materials, supplies and commodities. It is understood, that Grantor shall have the right to use or cross said road at such times and in such manner as may be done without injuring or damaging said road or interfering in any way with Grantee's use thereof or enjoyment of the rights granted.

To have and to hold unto Grantee, its successors and assigns, the easement, rights and privileges herein granted and conveyed.

The consideration paid to Grantor hereunder constitutes payment in full for the use of said roadway easement and for all claims for damages out of or incident to the use of the surface of the strip of land located within the above described lands by Grantee, its successors and assigns, in connection with the drilling for and production of oil and gas by Grantee, its licensees, successors and assigns from wells located on lands in the vicinity of said easement, together with all operations incident thereto. Notwithstanding anything contained to the contrary herein, should the well or wells contemplated hereunder be drilled and completed as producing well(s) of oil and/or gas and associated hydrocarbons, Grantor and Grantee shall enter into an easement agreement to be effective so along as the above mentioned oil and/or gas wells are productive.

Grantee agrees that it shall be responsible for any injury caused to the lands of the Grantor and growing crops thereon or adjacent to said Easement caused by Grantee, its successors and assigns, and Grantee shall pay Grantor for any damages resulting therefrom. Grantee also agrees that if a permanent roadway is constructed, the drainage of water to the reservoir will be protected and, if need be, a culvert will be installed to protect such drainage.

The terms and provisions herein shall constitute covenants running with the land, shall be binding upon and inure to the benefit of the successors and assigns of both the Grantor and Grantee.

Executed and dated this 17th day of February, 1996

Marvin Redburn

Patricia Redburn

STATE OF COLORADO
County of Cortez OF Montezuma

On this 17th day of February, 1996, before me personally appeared Marvin Redburn and Patricia Redburn, husband and wife , to me personally known to be the persons who executed the foregoing instrument, acknowledged that they executed the same as their free act and deed.

Witness my hand and seal this 17th day of February, 1996

My Commission Expires: 1/9/2000

Notary Public.

Anon Co

Western Gas Resources.

San Juan River Plant

February 9, 1996

McInlay & Associates, Inc.
2305 Oxford Lane
Casper, Wyoming 82602
Attn: Larry Miller

Dear Larry:

Peteral Exploration has the permission of Western Gas Resources to cross our line at Section 33, T37N, R25E. The only provision to this permission is that any points crossed by heavy equipment must be preceded by ensuring that at least 2 feet of padding covers our line.

If you have any questions, please contact me at the address or number below.

Sincerely,

Arlyn Thorson
Field Supervisor

99 Rd. 6500 • P.O. Box 70 • Kirtland, New Mexico 87417 • (505) 598-5601

QUESTAR PIPELINE COMPANY

1005 D STREET • P. O. BOX 1129 • ROCK SPRINGS, WYOMING 82902 • PHONE (307) 382-8882

February 5, 1996 NPR-339.928

Petral Exploration
P.O. Box 5083
Denver, CO 80202

Attention: Dianne Shroyer

Dear Ms. Shroyer:

Subject: Proposed Well Access Road

This letter is in response to Petral Exploration's proposal to construct a well access road in the Patterson Unit area, which will encroach on Questar Pipeline Company's (QPC) Lateral No. 928 right-of-way. QPC owns, operates, and maintains a 6⅝-inch O.D. high-pressure natural gas pipeline in the vicinity of the proposed access road in Section 33, Township 37 South, Range 25 East, San Juan County, Utah. Also, Texaco owns, operates, and maintains a 6-inch pipeline parallel to QPC's Lateral No. 928 which is offset approximately one foot.

QPC consents to the proposed access road encroachment and requests that the construction be performed in accordance with the following stipulations, as well as in accordance with all other appropriate practices and procedures:

1. Prior to any construction within 25 feet of the pipeline, advance notice of 48 hours is required. The notice shall be given to Robert Ramsey, Pipeline Superintendent, or John Henderson, Assistant Pipeline Superintendent, Rock Springs, Wyoming, Telephone (307) 382-8882.

2. For parallel encroachments on QPC's right-of-way, the edge of the access road shall maintain a minimum horizontal offset of 10 feet to the centerline of the pipeline.

3. The access road shall cross QPC's pipeline as near as possible to a 90 degree angle.

4. Petral Exploration or its contractor will provide an additional 2'0" of compactable granular material over QPC's pipeline at the point where the access road crosses the pipeline. The additional material shall be installed over the entire width of the right-of-way, or 15 feet on either side of the centerline of the pipeline.

5. No borrow ditches shall be cut over QPC's pipeline such that the minimum amount of cover from the low point in the ditch to the top of the pipeline is less than 3 feet.

6. No vehicles with a single-point wheel load of 10,500 pounds or more shall cross QPC's pipeline unless specific permission is granted by QPC, and precautionary measures are taken by Petral Exploration.

This letter does not in any way alleviate your responsibility to seek necessary authorizations and approvals from appropriate landowners and other regulating agencies before constructing the access road.

Enclosed is QPC Drawing No. M-15471 for your reference. Your cooperation in this matter is greatly appreciated.

Sincerely,

Nick P. Roich

Nick P. Roich
Engineering Technician

se/cr

Enclosure

cc: R. W. Headd
R. J. Ramsey/J. R. Henderson

ARCHAEOLOGICAL SURVEY OF PETRAL EXPLORATION COMPANY'S PROPOSED KNOCKDHU FED. #2 WELL PAD SAN JUAN COUNTY, UTAH

4-CAS REPORT 9617

by
Carol S. DeFrancia

4-CORNERS ARCHAEOLOGICAL SERVICES
76 S. Main Street
Moab, Utah 84532
(801) 259-2777

July 27, 1996

FEDERAL ANTIQUITIES PERMIT 95UT62712
Utah State Permit No. U-96-FE-0390b

Prepared For:
Petral Exploration
1700 Lincoln, Suite 5000
Denver, CO 80203

TABLE OF CONTENTS

LIST OF FIGURES

ABSTRACT

The archaeological survey of Petral Exploration Company's Knockdhu Federal # 2 well pad was conducted by personnel of 4-Corners Archaeological Services on July 22, 1996. The project is located in the vicinity of Little Nancy Canyon in San Juan County, Utah, approximately twenty miles southeast of the town of Blanding. A total of 10 acres were inventoried for cultural resources.

No cultural resources were found in the project area and archaeological clearance is recommended.

INTRODUCTION

The archaeological survey of Petral Exploration Company's proposed Knockdhu Federal #2 well pad was conducted by Carol DeFrancia of 4-Corners Archaeological Services on July 22, 1996. The project is located along a flat bench area above Little Nancy Canyon (Figure 1) on lands administered by the Bureau of Land Management, San Juan Resource Area Office, Monticello. The survey was requested by Mr. Ed McIlnay, of McIlnay & Associates, Inc. Huddleston Surveying personnel staked and flagged the well pad prior to the survey. The proposed well location will be accessed on the east side from an existing well service road. A total of 10 acres were inventoried for cultural resources (Figure 2).

Federal and state governments have enacted legislation that is designed to conserve and protect cultural resources. The principal federal legislation includes the Antiquities Act of 1906 (PL 52-209), the National Historic Preservation Act of 1966 (PL 89-665), the National Environmental Policy Act of 1969 (PL 91-190), the 1971 Executive Order No. 11593, the Archaeological and Historical Conservation Act of 1974 (PL 93-291), and the Archaeological Resource Protection Act (ARPA) of 1978 (PL 95-96).

No cultural resources were found in the project area. One previously documented site, 42SA22770, lies approximately 175' north of the well location and will not be affected by project activities. Archaeological clearance is recommended for the project.

PROJECT AREA

Map Reference: Bug Canyon, Utah 1985 (7.5' series)

Total Project Area: 1.4 acres; area surveyed 10 acres

Knockdhu Federal # 1 Well Pad

Legal Description: T37S, R25E: Section 33

Center Stake: 1950' FSL, 1570' FEL; T37S, R25E, Section 33

UTM Coordinates: (Surveyed Area)		Easting	Northing
	NW Corner	661370	4154620
	NE Corner	661560	4154540
	SE Corner	661480	4154340
	SW Corner	661290	4154430

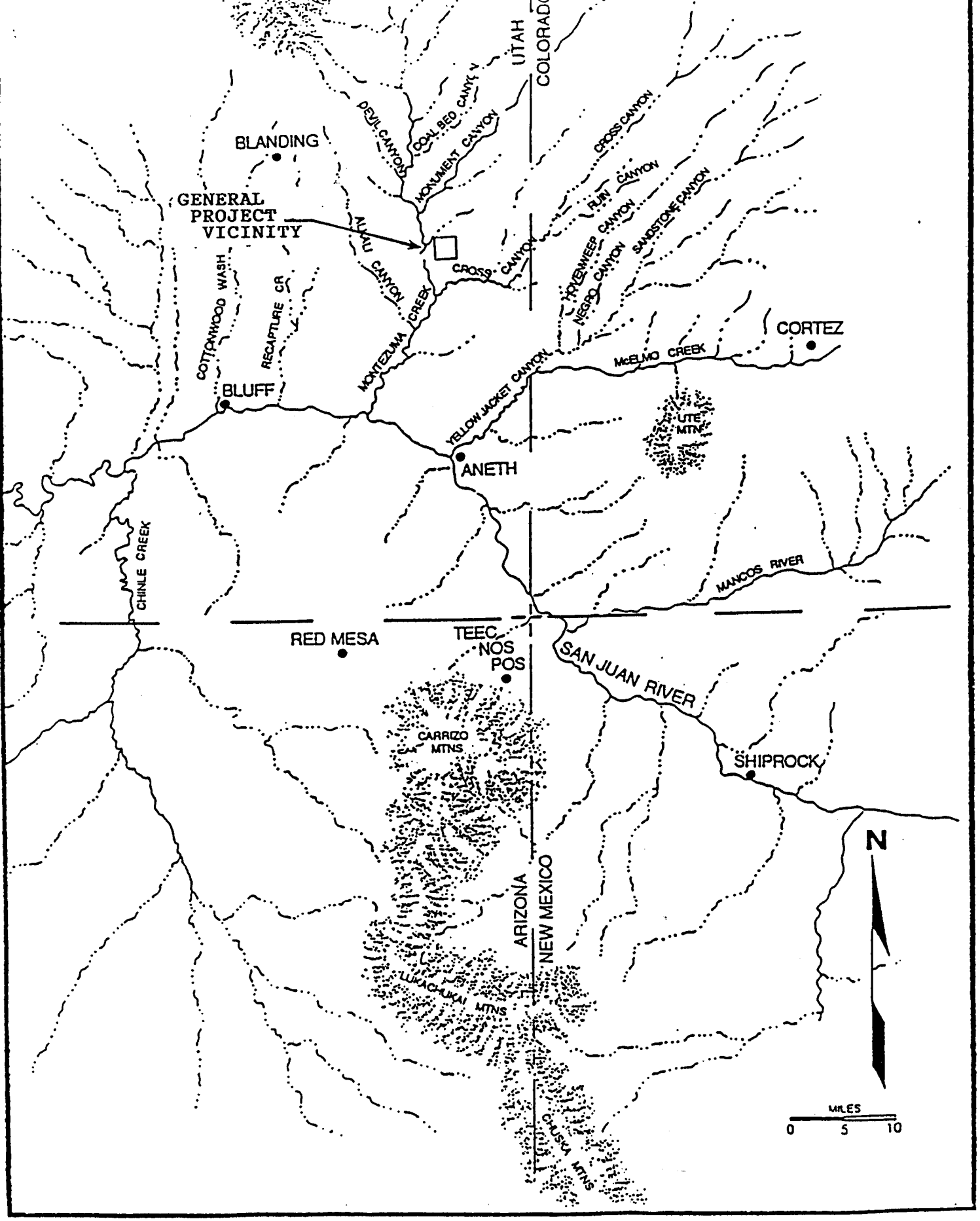
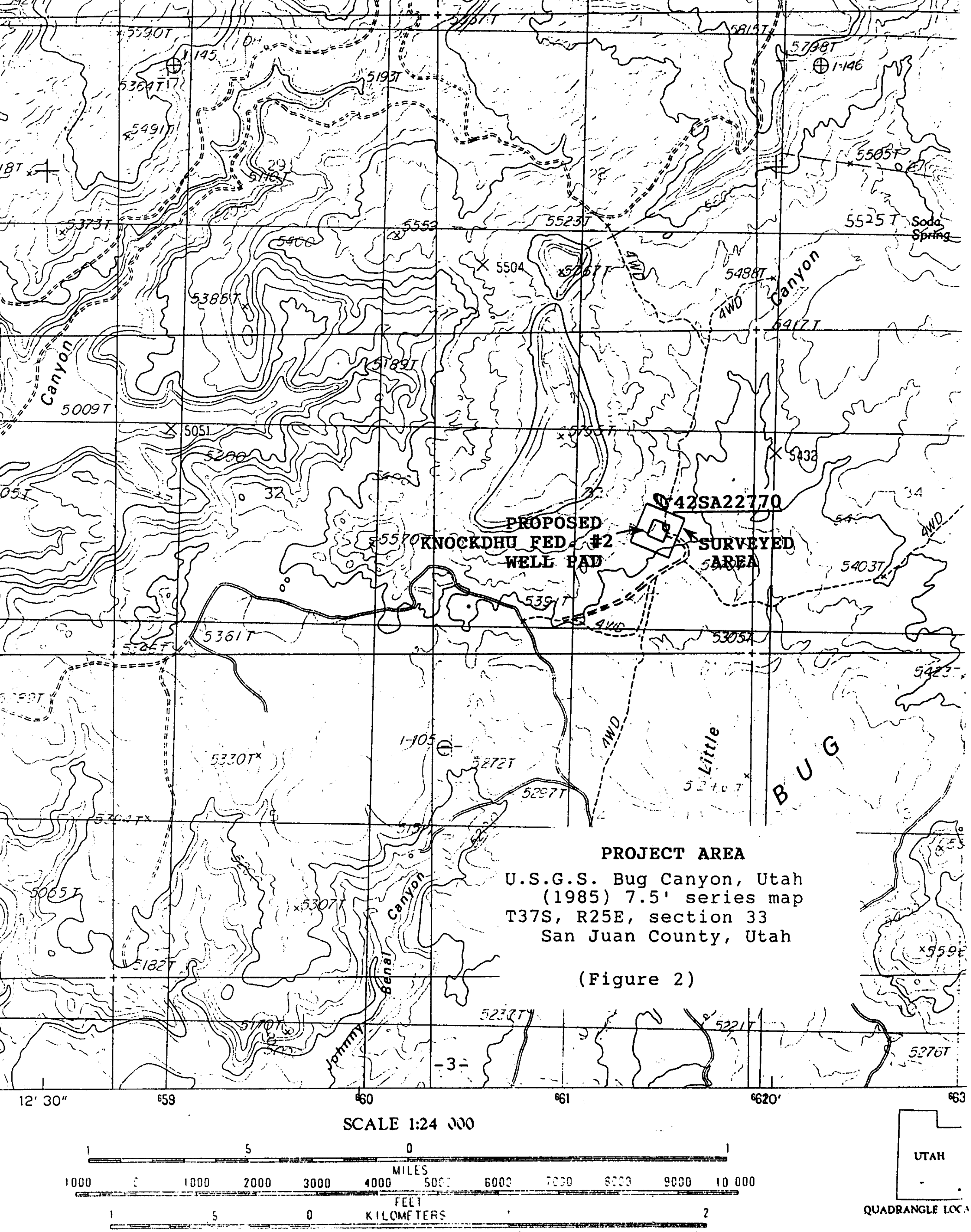


Figure 1. Project Area



PROJECT AREA
U.S.G.S. Bug Canyon, Utah
(1985) 7.5' series map
T37S, R25E, section 33
San Juan County, Utah

(Figure 2)

McILNAY & ASSOCIATES, INC.

McILNAY

2305 OXFORD LANE • CASPER, WY 82604 • (307) 265-4351 • FAX (307) 473-1218

PETROLEUM CONSULTING ENGINEERS & PROPERTY MANAGEMENT

REGISTERED PROFESSIONAL ENGINEERS

July 19, 1996

San Juan County Road Department
P. O. Box 188
Monticello, Utah 84535

Re: Application for Right-of-Way Encroachment Permit for
Access Route to Petral Exploration, Knockdhu Unit #2,
NW SE Sec. 33-T37S-R25E, San Juan Co, Utah

Dear Sir or Madam:

On behalf of our client, Petral Exploration, LLC, enclosed is our application for the subject Right-of-Way Encroachment Permit.

Please advise if you need additional information.

Very truly yours,

McILNAY & ASSOCIATES, INC.

Sharon Orr

so

Attachment

cc: Petral Exploration, LLC
Rose Exploration Associates

SAN JUAN COUNTY ROAD DEPARTMENT
835 East Highway 666
Post Office Box 188
Monticello, Utah 84535
(801) 587-3230

Application for Right-of-Way Encroachment Permit

Date July 17, 1996

TO: San Juan County Surveyor/Engineer
Post Office Box 188
Monticello, Utah 84535

Application is hereby made by: (1) Petral Exploration, LLC
c/o McIlnay & Associates, Inc.
Address (2) ~~2305 Oxford Lane, Casper, WY 82604~~
Telephone Number: (307) 265-4351 for permission to do the following: (3) Move in a drilling rig and other equipment as needed for drilling, completing and producing a well located in the NW,SE Sec. 33-T37S-R25E, SAn Juan Co., UT utilizing County Roads 206 and 347.

(4) Location:
As above

City Blanding County San Juan State UT
or U.S. Highway No. NA Milepost No. NA in accordance with the attached plan. (5)

(6) Construction will begin on or about NA 19____ and will be completed on or before _____ 19____.

If the proposed installation requires breaking of the pavement, give the following information:

a. Type of pavement: NA

b. The opening to be made will be _____ feet long by _____ feet wide and _____ feet deep.

c. A bond in the amount of $_____ has been posted with _____ Telephone No._____ to run of a term of three (3) years after completion of work to guarantee satisfactory performance.

(7) If this permit is granted, we agree to comply with all conditions, restriction, and regulations as contained in the "Regulations for the Control and Protection of State Highway

Rights-of-Way", approved by the Utah State Road Commission of October 8, 1962, and all revisions thereto or Regulations adopted by the San Juan County Commission.

(8) In approving this application and locations of utilities, and effort will be made to approve only locations that will not be affected in the event that San Juan County changes the roadway. But, in situations in which the utility has to be moved, this moving shall be done by the utility company or paid for by the company.

(9) For any and all applications requesting authority to use vibratory equipment, applicants shall:

a. Provide map showing where vibrations will take place.

b. Agree to repair any damages or replace any property damaged.

c. Take full responsibility for proper flagging and traffic control.

d. Agree that vibrating done in the area of dirt roads shall be done on the dirt road rather than in the bar ditch to minimize damage.

e. Provide a schedule of the planned work and estimated dates of completion.

f. Attach written permission from all adjacent fee-title owners.

g. The San Juan County commission has authorized the San Juan County Surveyor/Engineer (or his Assignees) to issue permits.

(10) San Juan County can only grant permission to the extent that the County has the authority to do so and the permission granted hereunder is limited to the interest of authority actually owned by San Juan County and no warranties of ownership or authority to grant permission is expressed or implied by the granting of this permit.

BY: Ken Kidneigh, McInay & Associates, Inc.
Representative for Petral Exploration, LLC
TITLE

To be filled in by San Juan County Surveyor/Engineer.

(1) Permit should be granted_____

Permit should not be granted_____

(2) Additional requirements which should be imposed_____.

_____
SAN JUAN COUNTY SURVEYOR/ENGINEER

31S-24E Sec 32

STATE OF UTAH

MAR 4

*Receipt # .....

Microfilmed .....

Roll # .....

For the purpose of obtaining permission to make a temporary change of water in the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.

*WATER RIGHT NO. 09 - 156 *APPLICATION NO. t t19778

Changes are proposed in (check those applicable)

_____ point of diversion. X place of use. X nature of use. X period of use.

1. OWNER INFORMATION

Name: R.W. Trucking *Interest: ____%

Address: P.O. Box 1208

City: Cortez State: Colorado Zip Code: 81321

2. *PRIORITY OF CHANGE: December 10, 1951 *FILING DATE: March 4, 1996

3. RIGHT EVIDENCED BY: 09-156 (A23462; a5076) Cert. No. 7854

Prior Approved Temporary Change Applications for this right: _____

********** HERETOFORE **********

4. QUANTITY OF WATER: 0.364 cfs and/or _____ ac-ft.

5. SOURCE: Underground Water Well

6. COUNTY: San Juan

7. POINT(S) OF DIVERSION:

N. 531 ft. & E. 1810 ft. from W¼ Cor. Sec. 1, T38S, R24E, SLB&M

Description of Diverting Works: 4-inch casing, 538 feet deep

8. POINT(S) OF REDIVERSION

The water has been rediverted from _____ at a point: _____

Description of Diverting Works: _____

9. POINT(S) OF RETURN

The amount of water consumed is 0.364 cfs or _____ ac-ft.

The amount of water returned is _____ cfs or _____ ac-ft.

The water has been returned to the natural stream/source at a point(s): _____

*These items are to be completed by the Division of Water Rights.

Temporary Change

Municipal: From ____ to ____
Mining: From ____ to ____
Power: From ____ to ____
Other: From ____ to ____

11. PURPOSE AND EXTENT OF USE
Irrigation: 80.4 acres. Sole supply of ____ acres.
Stockwatering (number and kind): ____
Domestic: ____ Families and/or ____ Persons.
Municipal (name): ____
Mining: ____ Mining District in the ____ Mine
Ores mined: ____
Power: Plant name: ____ Type: ____ Capacity: ____
Other (describe): ____

12. PLACE OF USE
Legal description of place of use by 40 acre tract(s): ____
SW¼NE¼, SE¼NW¼, NE¼SW¼, W½SE¼ Sec. 1, T38S, R24E, SLB&M

13. STORAGE
Reservoir Name: ____ Storage Period: from ____ to ____
Capacity: ____ ac-ft. Inundated Area: ____ acres.
Height of dam: ____ feet.
Legal description of inundated area by 40 tract(s): ____

********** THE FOLLOWING CHANGES ARE PROPOSED **********

14. QUANTITY OF WATER: ____ cfs and/or 3.0 ac-ft.
15. SOURCE: Underground Water Well - Existing
Balance of the water will be abandoned: ____, or will be used as heretofore: X
16. COUNTY: San Juan
17. POINT(S) OF DIVERSION: Same as heretofore
Description of Diverting Works: 4-inch casing, 538 feet deep; portable pump and tank truck
*COMMON DESCRIPTION: 9 miles North of Hatch Trading Post Bug Canyon Quad

18. POINT(S) OF REDIVERSION
The water will be rediverted from ____ at a point: ____
Description of Diverting Works: ____

19. POINT(S) OF RETURN
The amount of water to be consumed is ____ cfs or 3.0 ac-ft.
The amount of water to be returned is ____ cfs or ____ ac-ft.
The water will be returned to the natural stream/source at a point(s): ____

Domestic: From ___/___/___ to ___/___/___
Municipal: From ___/___/___ to ___/___/___
Mining: From ___/___/___ to ___/___/___
Power: From ___/___/___ to ___/___/___
Other: From 3 / 1 /96 to 12/31/96

21. PURPOSE AND EXTENT OF USE

Irrigation: _____ acres. Sole supply of _____ acres.
Stockwatering (number and kind): _____
Domestic: _____ Families and/or _____ Persons.
Municipal (name): _____
Mining: _____ Mining District at the _____ Mine.
Ores mined: _____
Power: Plant name: _____ Type: _____ Capacity:
Other (describe): Exploration drilling, road construction & maintenance, dust suppression

22. PLACE OF USE

Legal description of place of use by 40 acre tract(s):
1) Petral Fed. Aultmore #1: SE¼ Sec. 24, T37S, R24E, SLB&M
2) Petral Fed. Knockando #1: NW¼ Sec. 19, T37S, R25E, SLB&M

23. STORAGE

Reservoir Name: _____ Storage Period: from _____ to _____
Capacity: _____ ac-ft. Inundated Area: _____ acres.
Height of dam: _____ feet.
Legal description of inundated area by 40 tract(s): _____

24. EXPLANATORY

The following is set forth to define more clearly the full purpose of this application. Include any supplemental water rights used for the same purpose. (Use additional pages of same size if necessary):
The applicant is purchasing the water from the water right owner, Mr. Richard Gore.
See attached letter.

****

The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

Robert F McDonald
Signature of Applicant(s)

STATE ENGINEER'S ENDORSEMENT

TEMPORARY CHANGE APPLICATION NUMBER: t19778 WATER RIGHT NUMBER: 09-156

1. March 4, 1996 Change Application received.

2. March 4, 1996 Application designated for APPROVAL by MP.

3. Comments:

Conditions:
This application is hereby APPROVED, dated March 4, 1996, subject to prior rights and this application will expire on December 31, 1996.

Mark Page, Regional Engineer
for
Robert L. Morgan, State Engineer

Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL: OIL WELL ☒ GAS WELL ☐ OTHER ____ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR: PETRAL EXPLORATION, LLC C/O MCILNAY & ASSOCIATES, INC

3. ADDRESS OF OPERATOR: 2305 OXFORD LANE CASPER WY 82604

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: (SE NW SE) 1950'FSL 1573' FEL Sec. 33-T37S-R25E
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: UTU-065915
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
7. UNIT AGREEMENT NAME: KNOCKDHU UNIT 75040X
8. FARM OR LEASE NAME: KNOCKDHU UNIT
9. WELL NO.: 2
10. FIELD AND POOL, OR WILDCAT: UNNAMED
11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 33-T37S-R25E
12. COUNTY OR PARISH: San Juan
13. STATE: Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 18 Miles SE from Blanding, Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): Lease 671' Unit 671'
16. NO. OF ACRES IN LEASE: Lease 280 Acres Unit 600 Acres
17. NO. OF ACRES ASSIGNED TO THIS WELL: 40
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: Lease -N/A Unit- 2539
19. PROPOSED DEPTH: 5850'
20. ROTARY OR CABLE TOOLS: Rotary
21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5424' GL 5432' KB
22. APPROX. DATE WORK WILL START*: September 1, 1996

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	¼" Wl. thick	80'	To surface
12¼"	85/8"	24#/ft.	1650'	To surface
77/8"	5½"	15.5#/ft.	5850'	220 sx

Request is made for all information to be held CONFIDENTIAL.

It is proposed to drill a well at the above location with the primary zone of interest the Upper Ismay Mound formation at 5510' TVD. If the well proves productive, 5½" casing will be cemented in place and the well completed. If the well is found non-productive, it will be plugged and abandoned and the surface restored as per BLM specificaitons.

See attached "Drilling Program" summary and "Surface Use Program" for details

I hereby certify that Petral Exploration LLC is responsible under the terms and conditions of the lease to conduct lease operations in conjunction with the application. Bond coverage pursuant to 43 CFR 3104 for lease activities is provided by BLM bond No. UT 1040.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Anthony R Mayer TITLE Petral Exploration, LLC, Petroro Corp., Manage Anthony R. Mayer, Sr VP DATE July 28, 1996

(This space for Federal or State office use)

PERMIT NO. ____ APPROVAL DATE ____

APPROVED BY [signature] TITLE Assistant Field Manager, Resource Management DATE 8/22/96

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

FLARING OR VENTING OF GAS SUBJECT TO NTL 4-A

*See Instructions On Reverse Side

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 08/02/96

API NO. ASSIGNED: 43-037-31779

WELL NAME: KNOCKDHU UNIT 2
OPERATOR: PETRAL EXPLORATION LLC (N7700)

PROPOSED LOCATION:
NWSE 33 - T37S - R25E
SURFACE: 1950-FSL-1573-FEL
BOTTOM: 1950-FSL-1573-FEL
SAN JUAN COUNTY
UNDESIGNATED FIELD (002)

LEASE TYPE: FED
LEASE NUMBER: UTU-065915

PROPOSED PRODUCING FORMATION: ISMAY

INSPECT LOCATION BY: / /		
TECH REVIEW	Initials	Date
Engineering		
Geology		
Surface		

RECEIVED AND/OR REVIEWED:

Y Plat
Y Bond: Federal [✓] State [] Fee []
(Number UT 1040)
N Potash (Y/N)
N Oil shale (Y/N)
___ Water permit
(Number _____)
___ RDCC Review (Y/N)
(Date: _____)

LOCATION AND SITING:

✓ R649-2-3. Unit: KNOCKDHU
___ R649-3-2. General.
___ R649-3-3. Exception.
___ Drilling Unit.
Board Cause no: _____
Date: _____

COMMENTS: _____

STIPULATIONS: _____

STATE OF UTAH, DIV OF OIL, GAS & MINERALS

Operator: PETRAL EXPLORATION LLC	Well Name: KNOCKDHU UNIT 2
Project ID: 43-037-31779	Location: SEC. 33 - T37S - R25E

Design Parameters:

Mud weight (12.00 ppg) : 0.623 psi/ft
Shut in surface pressure : 3168 psi
Internal gradient (burst) : 0.082 psi/ft
Annular gradient (burst) : 0.000 psi/ft
Tensile load is determined using air weight
Service rating is "Sweet"
*** WARNING *** Design factor for collapse exceeded in design!

Design Factors:

Collapse : 1.125
Burst : 1.00
8 Round : 1.80 (J)
Buttress : 1.60 (J)
Other : 1.50 (J)
Body Yield : 1.50 (B)

	Length (feet)	Size (in.)	Weight (lb/ft)	Grade	Joint	Depth (feet)	Drift (in.)	Cost
1	5,850	5.500	15.50	J-55	ST&C	5,850	4.825	

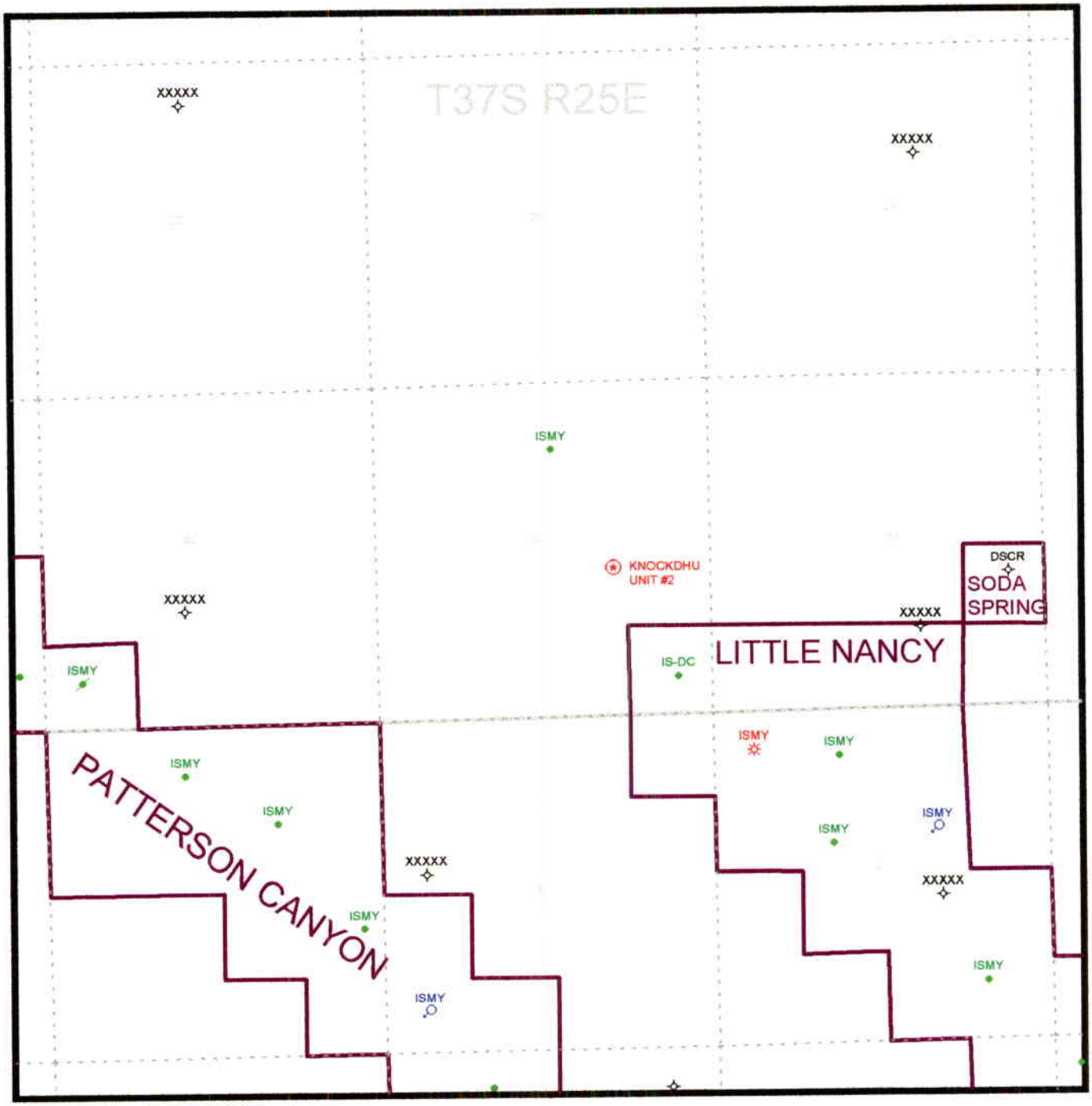
	Collapse Load (psi)	Collapse Strgth (psi)	Collapse S.F.	Burst Load (psi)	Min Int Yield Strgth (psi)	Burst S.F.	Tension Load (kips)	Tension Strgth (kips)	Tension S.F.
1	3647	4040	1.108	3647	4810	1.32	90.68	202	2.23 J

Prepared by : MATTHEWS, Salt Lake City, Utah
Date : 08-27-1996
Remarks :

UPPER ISMAY
Minimum segment length for the 5,850 foot well is 1,500 feet.
SICP is based on the ideal gas law, a gas gravity of 0.69, and a mean gas temperature of 115°F (Surface 74°F , BHT 156°F & temp. gradient 1.400°/100 ft.)
String type: Production
The mud gradient and bottom hole pressures (for burst) are 0.623 psi/ft and 3,647 psi, respectively.

NOTE: The design factors used in this casing string design are as shown above. As a general guideline, Lone Star Steel recommends using minimum design factors of 1.125 - collapse (with evacuated casing), 1.0 - (uniaxial) burst, 1.8 - API 8rd tension, 1.6 - buttress tension, 1.5 - body yield tension, and 1.6 - EUE 8rd tension. Collapse strength under axial tension was calculated based on the Westcott, Dunlop and Kemler curve. Engineering responsibility for use of this design will be that of the purchaser.
Costs for this design are based on a 1987 pricing model. (Version 1.07)

OPERATOR: PETRAL EXPLORATION
FIELD: UNDESIGNATED (002)
SEC, TWP, RNG: SEC. 33, T37S, R25E
COUNTY: SAN JUAN
UAC: R649-2-3 KNOCKDHU



PREPARED:
DATE: 27-JULY-96

McILNAY

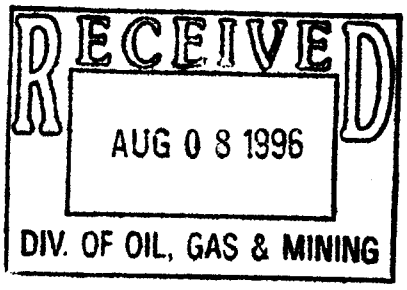
McILNAY & ASSOCIATES, INC.

2305 OXFORD LANE • CASPER, WY 82604 • (307) 265-4351 • FAX (307) 473-1218

PETROLEUM CONSULTING ENGINEERS & PROPERTY MANAGEMENT

REGISTERED PROFESSIONAL ENGINEERS

August 2, 1996



Mr. Frank Matthews
Utah Board of Oil, Gas & Mining
355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203

Re: Petral Exploration, LLC, #2 Knockdhu Unit, UTU-06915
SE NW SE Section 33-T37S-R25E

Dear Mr. Matthews:

By this letter we are requesting all drilling, completion and production information on the Knockdhu #2 Unit be held **CONFIDENTIAL** for the period allowed by the State.

Sincerely,

MCILNAY & ASSOCIATED, INC.

Sharon Orr

cc: Petral Exploration, LLC
Rose Exploration Associates

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340
801-359-3940 (Fax)
801-538-5319 (TDD)

August 27, 1996

Petral Exploration, LLC
c/o McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, Wyoming 82604

Re: Knockdhu Unit 2 Well, 1950' FSL, 1573' FEL, NW SE, Sec. 33, T. 37 S., R. 25 E., San Juan County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. 40-6-1 et seq., Utah Administrative Code R649-3-1 et seq., and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-037-31779.

Sincerely,

for R. J. Firth
Associate Director

lwp
Enclosures
cc: San Juan County Assessor
Bureau of Land Management, Moab District Office

Operator: Petral Exploration, LLC

Well Name & Number: Knockdhu Unit 2

API Number: 43-037-31779

Lease: UTU-065915

Location: NW SE Sec. 33 T. 37 S. R. 25 E.

Conditions of Approval

1. General
   Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for Permit to Drill.

2. Notification Requirements
   Notify the Division within 24 hours following spudding the well or commencing drilling operations. Contact Jimmie Thompson at (801)538-5336.

   Notify the Division prior to commencing operations to plug and abandon the well. Contact Frank Matthews at (801)538-5334 or Mike Hebertson at (801)538-5333.

3. Reporting Requirements
   All required reports, forms and submittals shall be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

Form 3160-3
(November 1983)
(formerly 9-331C)

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

RECEIVED
AUG 28 1996
DIV. OF OIL, GAS & MINING

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: UTU-065915

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL: OIL WELL [X] GAS WELL [ ] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. UNIT AGREEMENT NAME: KNOCKDHU UNIT 75040X

8. FARM OR LEASE NAME: KNOCKDHU UNIT

2. NAME OF OPERATOR: PETRAL EXPLORATION, LLC C/O MCILNAY & ASSOCIATES, INC

9. WELL NO.: 2

3. ADDRESS OF OPERATOR: 2305 OXFORD LANE CASPER WY 82604

10. FIELD AND POOL, OR WILDCAT: UNNAMED

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: (SE NW SE) 1950'FSL 1573' FEL Sec. 33-T37S-R25E
At proposed prod. zone: Same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 33-T37S-R25E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 18 Miles SE from Blanding, Utah

12. COUNTY OR PARISH: San Juan — 13. STATE: Utah

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any): Lease 671' Unit 671'

16. NO. OF ACRES IN LEASE: Lease 280 Acres Unit 600 Acres

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: Lease -N/A UNit- 2539'

19. PROPOSED DEPTH: 5850'

20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5424' GL 5432' KB

22. APPROX. DATE WORK WILL START*: September 1, 1996

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
20"	16"	⅛" Wl. thick	80'	To surface
12¼"	85/8"	24#/ft.	1650'	To surface
77/8"	5½"	15.5#/ft.	5850'	220 sx

Request is made for all information to be held CONFIDENTIAL.

It is proposed to drill a well at the above location with the primary zone of interest the Upper Ismay Mound formation at 5510' TVD. If the well proves productive, 5½" casing will be cemented in place and the well completed. If the well is found non-productive, it will be plugged and abandoned and the surface restored as per BLM specificaitons.

See attached "Drilling Program" summary and "Surface Use Program" for details

I hereby certify that Petral Exploration LLC is responsible under the terms and conditions of the lease to conduct lease operations in conjunction with the application. Bond coverage pursuant to 43 CFR 3104 for lease activities is provided by BLM bond No. UT 1040.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Anthony R. Mayer — Petral Exploration, LLC, Petroro Corp., Manage
TITLE Anthony R. Mayer, Sr VP DATE July 28, 1996

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY /s/ Kayman W. Carling — Assistant Field Manager, Resource Management — DATE AUG 23 1996

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED

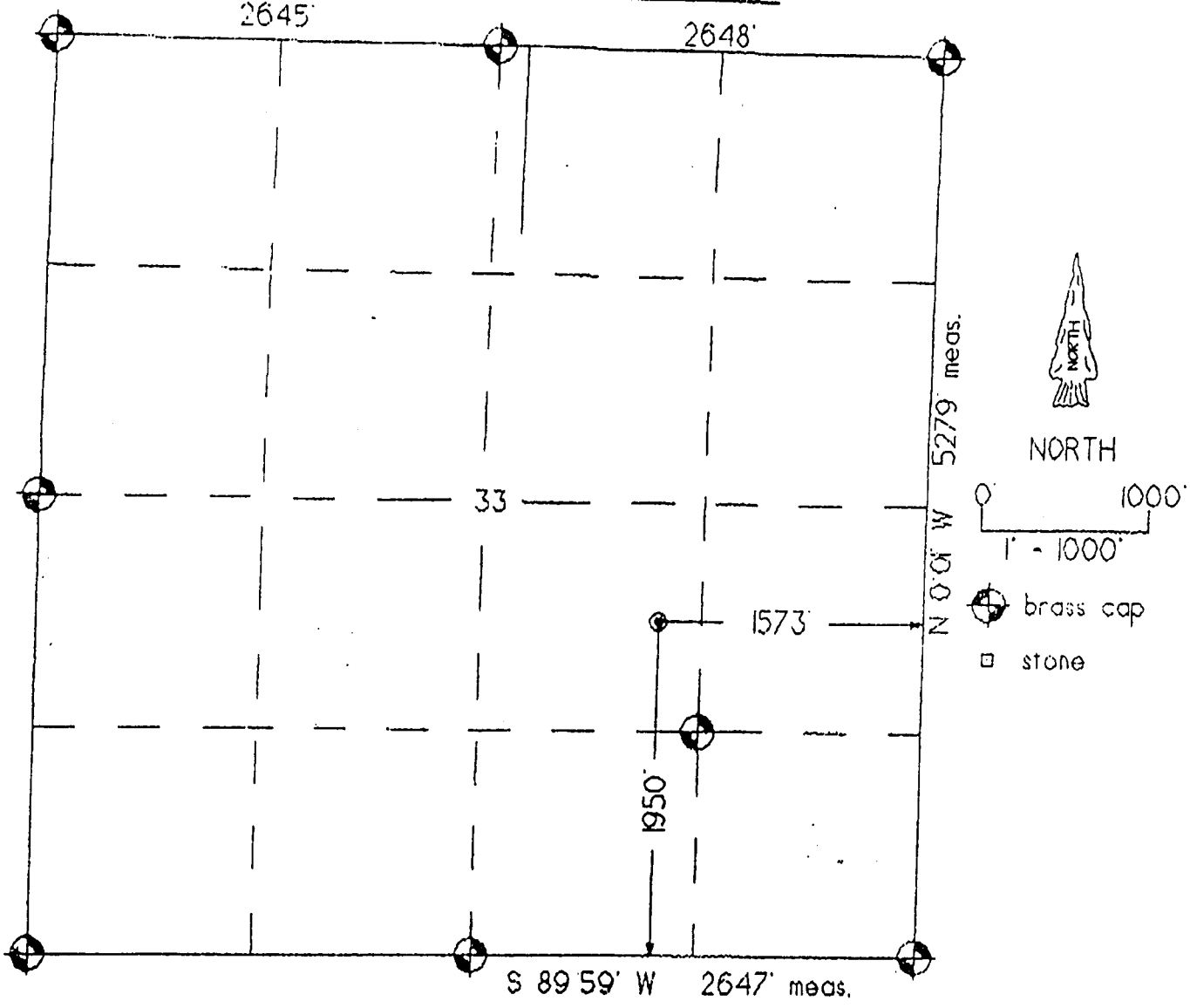
FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A DATED 1/1/80

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

DSM

Well Location Plat



Well Location Description

PETRAL EXPLORATION
2 Knockdhu Unit
1950'FSL. & 1573'FEL.
Section 33. T.37 S.. R.25 E.. SLM
San Juan County. UT
5424' grd. el. from seismic
320.925 N & 2.674.703 E from siesmic
320.921 N & 2.674.700 E from GPS

REGISTERED LAND SURVEYOR
GERALD G. HUDDLESTON
No. 181297
STATE OF UTAH

19 July 1996

Gerald G. Huddlesfon. LS

The above is true and correct to my knowledge and belief.

HUDDLESTON LAND SURVEYING - BOX KK - CORTEZ. CO - (970) 565 -3330

Petral Exploration, LLC
Knockdhu #2
Lease U-065915
SE/NW/SE, Section 33, T. 37 S., R. 25 E.
San Juan County, Utah

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Petral Exploration, LLC is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by UT-1040 (Principal - Petral Exploration, LLC) via surety consent as provided for in 43 CFR § 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR § 3106.7-2 continuing responsibility are met.

This permit will be valid for a period of one year from the date of approval. After permit termination, a new application must be filed for approval.

All lease operations will be conducted in full compliance with applicable regulations (43 CFR § 3100), Onshore Oil and Gas Orders, lease terms, notices to lessees, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions and the approved plan will be made available to field representatives to insure compliance.

A. DRILLING PROGRAM

1. The proposed 3M BOP system is adequate. Installation, testing and operation of the system shall be in conformance with Onshore Oil and Gas Order No. 2.

2. Any fluid bearing zones or lost circulation zones encountered while drilling will be isolated behind casing and cement.

3. If a gas meter run is constructed, it will be located on lease within 500 feet of the wellhead. The gas flowline will be buried from the wellhead to the meter and will be buried downstream of the meter until it leaves the pad. Meter runs will be housed and/or fenced. The gas meter shall be calibrated prior to first sales and shall be calibrated quarterly thereafter. All gas production and measurement shall comply with the provisions of 43 CFR § 3162.7-3, Onshore Oil and Gas Order No. 5, and American Gas Association (AGA) Report No. 3.

B. SURFACE USE PLAN

The following stipulations have been developed to mitigate adverse environmental impacts which may result from the action permitted by the accompanying decision. The action permitted and its anticipated impacts are fully described in the environmental assessment or categorical exclusion referenced above.

1. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the operator, or any person working on his behalf, on public or Federal land shall be immediately reported to the San Juan Resource Area Manager. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the San Juan Resource Area Manager. An evaluation of the discovery will be made by the San Juan Resource Area Manager to determine appropriate action to prevent the loss of significant cultural or scientific values. The operator will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the operator.

2. BLM will complete a raptor/owl survey and clearance of the affected area surrounding the proposed drilling site prior to work initiation if the proposed well is drilled between February 1, and July 15. If the raptor/owl survey locates an active raptor/owl nest which would be affected by this proposal, no work would be allowed until nestlings have fledged.

3. Deer winter range restrictions from December 15, through April 30 are imposed for well location preparation and drilling operations.

4. All permanent above the ground production equipment will be painted Juniper Green.

5. The reserve pit shall remain free of hydrocarbons at all times. Any hydrocarbons entering the reserve pit will be removed promptly or the pit will be effectively sealed with netting material with a mesh of one inch or less.

6. Reclamation of the entire disturbed area will be accomplished by grading the area as near as near as practical back to the natural contour and spreading the top soil evenly as possible over the area. The entire disturbed area will be scarified with a 6 inch or less distance between ripped surfaces. The soil surface will be dry and loose prior to seeding and will be broadcast seeded between October 1, and February 28 with the following mixture of pure live seed:

Galleta	2 pounds/acre
Indian ricegrass	2 pounds/acre
Fourwing saltbush	2 pounds/acre
Sand dropseed	1 pound/acre
Wild sunflower	1 pound/acre
Cliffrose	1 pound/acre
Morman tea	1 pound/acre

C. REQUIRED APPROVALS, REPORTS AND NOTIFICATIONS

Required verbal notifications are summarized in Table 1, enclosed.

Building Location- Contact the BLM Petroleum Engineering Technician (Jeff Brown) at the Monticello BLM Field Office at least 48 hours prior to commencing construction of location.

Spud- The spud date will be reported to BLM 24 hours prior to spudding. Written notification in the form of a Sundry Notice (Form 3160-5) will be submitted to the Moab BLM Field Office within 24 hours after spudding, regardless of whether spud was made with a dry hole digger or big rig.

Daily Drilling Reports- Daily drilling reports shall detail the progress and status of the well and shall be submitted to the Moab BLM Field Office on a weekly basis.

Monthly Reports of Operations- In accordance with Onshore Oil and Gas Order No. 1, this well shall be reported on Minerals Management Service (MMS) Form 3160, "Monthly Report of Operations," starting the month in which operations commence and continuing each month until the well is physically plugged and abandoned. This report will be filed directly with MMS.

Sundry Notices- There will be no deviation from the proposed drilling and/or workover program without prior approval. "Sundry Notices and Reports on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR § 3162.3-2. Safe drilling and operating practices must be observed.

Drilling Suspensions- Operations authorized by this permit shall not be suspended for more than 30 days without prior approval of the Moab BLM Field Office. All conditions of this approval shall be applicable during any operations conducted with a replacement rig.

Undesirable Events- Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be immediately reported to the BLM in accordance with requirements of NTL-3A.

Cultural Resources- If cultural resources are discovered during construction, work that might disturb the resources is to stop, and the BLM is to be notified.

First Production- Should the well be successfully completed for production, the Moab BLM Field Office will be notified when the well is placed in producing status. Such notification may be made by phone, but must be followed by a sundry notice or letter not later than five (5) business days following the date on which the well is placed into production.

A first production conference will be scheduled as soon as the productivity of the well is apparent. This conference should be coordinated through the Monticello BLM Field Office. The Monticello BLM Field Office shall be notified prior to the first sale.

Well Completion Report- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted to the Moab BLM Filed Office not later than thirty (30) days after completion of the well or after completion of operations being performed, in accordance with 43 CFR § 3162.4-1. Two copies of all logs, core descriptions, core analyses, well test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or

completion operations, will be filed with Form 3160-4. When requested, samples (cuttings and/or samples) will be submitted to the Moab BLM Field Office.

Venting/Flaring of Gas- Gas produced from this well may not be vented/flared beyond an initial, authorized test period of 30 days or 50 MMcf, whichever occurs first, without the prior, written approval of the BLM. Should gas be vented or flared without approval beyond the authorized test period, the well may be ordered shut-in until the gas can be captured or approval to continue the venting/flaring as uneconomic is granted. In such case, compensation to the lessor shall be required for that portion of the gas that is vented/flared without approval and which is determined to have been avoidably lost.

Produced Water- Produced waste water may be confined to an unlined pit for a period not to exceed 90 days after initial production. During the 90 day period, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted to the Moab BLM Field Office for approval pursuant to Onshore Oil and Gas Order No. 7.

Off-Lease Measurement, Storage, Commingling- Prior approval must be obtained from the Moab BLM Field Office for off-lease measurement, off-lease storage and/or commingling (either down-hole or at the surface).

Plugging and Abandonment- If the well is completed as a dry hole, plugging instructions must be obtained from the Moab BLM Field Office prior to initiating plugging operations.

A "Subsequent Report of Abandonment" (Form 3160-5) shall be filed with the Moab BLM Field Office within thirty (30) days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR § 3162.6. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the BLM, or the appropriate surface managing agency.

TABLE 1. NOTIFICATIONS

Notify Jeff Brown of the Monticello BLM Field Office in Monticello, Utah, at (801) 587-2141, or at home (801) 587-2046 for the following:

2 days prior to commencement of dirt work, construction and reclamation;

1 day prior to spudding;

50 feet prior to reaching each casing setting depth;

3 hours prior to testing BOPE

If the person at the above number cannot be reached, notify the Moab BLM Field Office at (801) 259-6111. If unsuccessful, contact one of the people listed below.

Well abandonment operations require 24 hour advance notice and prior approval. In the case of newly drilled dry holes, verbal approval can be obtained by calling the Moab Field Office at (801) 259-6111. If approval is needed after work hours, you may contact the following:

Gary Torres, Petroleum Engineer	Office:	(801) 587-2141
	Home:	(801) 587-2705
Eric Jones, Petroleum Engineer	Office:	(801) 259-2117
	Home:	(801) 259-2214

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: August 30, 1996
pages: 2, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

Dolg File

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

Status Report

Petral Exploration, LLC
Knochdhu Federal Unit #2
Sec. 33-T37S-R25E
San Juan Co., UT

8-25-96
Received approved BLM APD 8/25/96. Triad moving in this AM (8/26/96) to start dirtwork. Hopefully will have finished by 8/29/96.

8-26-96
Began dirtwork 8-26-96. Anticipate finishing 8-28-96. Four Corners Rig #7 waiting to move to location. Notified BLM of start of dirtwork.

8-27-96
Pad 60-65% complete. Will start reserve pit 8-28-96 AM.

8-28-96
Finished pad and started reserve pit. Dug down 3' on top end and 4-5' on lower end. Hit solid rock. Attempted to rip with no success. Will be necessary to dynamite rock. Contract dynamiter not available till 8-30-96. Estimated now will not have location and pit finished till 9-1-96. Therefore, anticipate moving in Four Corners rig 9-2-96 if trucks are available. No dry hole digger is available to set conductor. Will set with rig.

8-29-96
Finished final grading on pad. Again attempted to rip reserve pit - unsuccessful. Dynamiter will be on location at daylight 8-30-96. Anticipate move in and rig up of Four Corners Rig #7 9-1-96.

CONFIDENTIAL

DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: PETRAL EXPLORATION LLC

Well Name: KNOCKDHU UNIT 2

Api No. 43-037-31779

Section 33 Township 37S Range 25E County SAN JUAN

Drilling Contractor FOUR CORNERS

Rig #: 7

SPUDDED:

Date: 8/31/96

Time: 6:00 PM

How: ROTARY

Drilling will commence:

Reported by: LARRY MILLER

Telephone #:

Date: 9/3/96 Signed: FRM

CONFIDENTIAL

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: UTU-065915

6. If Indian, Allottee or Tribe Name: NA

7. If Unit or CA, Agreement Designation: Knockdhu Unit 75040X

1. Type of Well: [XX] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.: 2

2. Name of Operator: Petral Exploration, LLC

9. API Well No.: 43-037-31779

3. Address and Telephone No.: c/o McIlnay & Associates, Inc. 2305 Oxford Lane, Casper, WY 82640 (307) 265-4351

10. Field and Pool, or Exploratory Area: Unnamed

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

11. County or Parish, State: San Juan Co., UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[XX] Notice of Intent	[ ] Abandonment	[XX] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

13 3/8" casing will be utilized for conductor pipe instead of 16".

RECEIVED
SEP 04 1996
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Signed Edward W. McIlnay Title McIlnay & Associates, Inc. Consulting Engineers Date 8-29-30

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: September 6, 1996
pages: 4, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you would any additional information please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265 4351
Fax: 307 473-1218

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: September 6, 1996
pages: 4, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265 4351
Fax: 307 473-1218

Daily Drilling Report

Petral Exploration, LLC
Knochdhu Unit #2, UTU-065915
API No. 43-037-31779
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT

CONFIDENTIAL

Four Corners Rig #7
Larry Miller - MAI

8-30-96
Dynamited rock in reserve pit. Removing rock from pit

8-31-96
Finished removing rock from pit. Bentonited reserve pit. Hauled in 16 loads of fresh water. Will move rotary tools in 9/1/96 AM.

9-2-96 **Work completed day prior - 1 day from spud**

Depth: 50' - made 50' in 4 1/2 Hrs.

Status: Drilling mouse and rat hole

Hours:
- 4 1/2 Drilling
- 7 1/4 Drilling rat and mouse hole
- 1/4 Rig repair
- 1/4 Survey
- 3 1/2 Waiting on mud
- 1 Mix mud

BIT: 1, 9 5/8", Rerun - used

Mud: Gel & water

BHA: Bit, Shock sub & kelly
RPM - 60 - 75, Pump - 1400 PSI, Pump #1 - 6 x 8, 102 SPM

Details: Moved in and rigged up rotary tools. Mud truck was lost - waited for 3 1/2 hours. Spudded @ 6 PM 9/1/96. BLM notified. Drilled 9 5/8" pilot hole (conductor) to 50' (rock and hard sandstone). Drilling mouse and rat hole at report time. Will set 80' of conductor with rig. Dry hole digger was not available.

Geo: Rock and hard sandstone.

9-3-96 **2 days from spud**

Depth: 144' - made 94' in 8 3/4 Hrs. Cum. Drlg. Hrs. 13 1/4 Hrs

Status: Drilling

Hours:
- 8 3/4 Drilling
- 1/2 Wash & ream
- 1/4 Circulate
- 1/4 Survey
- 1/2 Lay down BHA
- 1 1/4 Run casing
- 1/2 Cementing
- 12 WOC

BIT: 1, 9 5/8", Rerun - used - In @ 0 - out @ 85' - made 85' in 11 12 Hrs.
2, 12 1/4", Reed HP51, SN[illegible]47488, In @ 85' reamed 85' and drilled additional 59' in 1 3/4/ Hrs. Jets 14-14-15, 33'/Hr.

Survey: 3/4" @ 104'

Mud: Gel & water

BHA: Bit, Shock sub, 2-8" DC, stabilizer, 1-8" DC, 1-6" DC
RPM - 80, Pump - 400 PSI, GPM 285
Pump #1 - 6 x 8, 102 SPM

Details: Finished drilling mouse hole to 85'. Circulated and laid down BHA. Ran 2 Jts. 13 3/8" conductor casing - 83 01' (landed @ 81' KB). Cemented casing w/100 sks. Regular cement w/3%CaCl. Circulated 4 Bbls. cement to pit. WOC 12 Hrs. Picked up bit and shock sub and TIH. Tagged [illegible] @ [illegible]'
Accident: Marlin Guilgn stuck wire in lower part of thumb. Witnessed by Bill Vallejo

Geo: Hard sandstone

Daily Drilling Reports

Petral Exploration, LLC — September, 1996
Knockdhu Unit #2, UTU-063915, San Juan Co., UT — Page 2

9-4-96 **3 days from spud**
Depth: 1320' - made 1176' in 21 Hrs. Cum. Drlg. Hrs. 34 1/4 Hrs.
Status: Drilling
Hours: 21 Drilling
3 Survey
BIT: 2, 12 1/4", Reed HP51, SNH47488, In @ 85' - made 1235' in 22 3/4 Hrs
Jets 14-14-15, 54.28'/Hr.
Survey: 1/2° @ 193', 1/2° @ 280', 3/4° @ 368', 1/2° @ 451', 1° @ 604', 1° @ 753', 1 1/4" @ 875', 2° @ 998', 2° @ 1059', 2° @ 1152', 1 1/4" @ 1244'
Mud: Gel & water
BHA: Bit, Shock sub, 2-8" DC, IBS, 1-8" DC, XO sub, 20-6 1/4" DC, 5 Jts. WT pipe = 844.5'
WOB 30-32,000#, RPM - 80, Pump - 1200 PSI, GPM 285
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
Details: Drilling. Notified Frank Matthews with UT State of spud. Met with Doug Pehrson, San Juan County Road Department, to work our repair of county road damaged by move in. Work will commence on 9-5-96. San Juan County will furnish road grader and gravel, Holliday Construction will haul gravel for Petral.
Geo: Sand & Shale

9-5-96 **4 days from spud**
Depth: 1678' - made 358' in 10 Hrs. Cum. Drlg. Hrs. 44 1/4 Hrs.
Status: WOC
Hours: 10 Drilling
3 1/4 Tripping
2 Circulating
1 3/4 Run casing
2 Cementing
5 WOC
BIT: 2, 12 1/4", Reed HP51, SNH47488, In @ 85' - out @ 1599' - made 1514' in 29 3/4 Hrs.
Jets 14-14-15, 50.8'/Hr., T2-B2-2 out of gauge
3, 12 1/4", Re-run, In @ 1599' - out @ 1678' - made 79' in 3 Hrs.
Survey: 1 1/2° @ 1364', 1 1/2° @ 1461', 1 1/2° @ 1553', 1 1/2° @ 1646',
Mud: Gel & water
BHA: Bit, Shock sub, 2-8" DC, IBS, 1-8" DC, XO sub, 20-6 1/4" DC, 5 Jts. WT pipe = 844.5'
WOB 25-30,000#, RPM - 60-75, Pump - 1000 PSI, GPM 285
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
SLM: Board - 1678.50' Talley 1680.60' No correction
Details: Drilled and surveyed - out to 2° - took weight off and brought back to 1 1/2°. Tripped for bit #2 and drilled to 1678'. circulated, SLM out of hole, laid down BHA and rigged up to run surface casing.

Surface Casing Detail

1	Guide Shoe	1.00	
1	Jt. 8 5/8", 24#/ft., J55, 8R, ST&C USA steel casing	43.68	
1	Insert Float Valve	- 0 -	
38	Jts. 8 5/8", 24#/ft., J55, 8R, ST&C USA steel casing	1625.17	
1	8 5/8" landing joint	14.00	
	Total	1683.85	
	Landed above KB	- 5.00	
	Casing landed KB	1678.85	KB

41 Jts. Delivered
38 Jts. Used
3 Jts. On location

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
   [XX] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator
   Petral Exploration, LLC
3. Address and Telephone No. c/o McIlnay & Associates, Inc. 2305 Oxford Lane, Casper, WY 82640 (307) 265-4351
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
   (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

5. Lease Designation and Serial No.
   UTU-065915
6. If Indian, Allottee or Tribe Name
   NA
7. If Unit or CA, Agreement Designation
   Knockdhu Unit 75040X
8. Well Name and No.
   2
9. API Well No.
10. Field and Pool, or Exploratory Area
    Unnamed
11. County or Parish, State
    San Juan Co., UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[XX] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Change of Plans:

Water source has been changed - see attached.

Water will be hauled from various locations as outlined on the approved Application for Temporary Change of Water.

RECEIVED
SEP 0 9 1996
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Sharon [illegible] Title McIlnay & Associates, Inc. Consulting Engineers Date September 5, 1996

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
Robert L. Morgan
State Engineer

State of Utah
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER RIGHTS

Southeastern Area
453 South Carbon Avenue
P.O. Box 718
Price, Utah 84501-0718
801-637-1303

August 30, 1996

Montezuma Well Service
P.O. Box 540
Montezuma Creek, Utah 84534

Re: Temporary Change Application Number t20344 (09-169)
Expiration Date: October 15, 1996

Dear Applicant:

The above referenced Temporary Change Application is hereby approved. A copy is enclosed for your information and records.

If you have any questions, please feel free to contact me.

Sincerely,

Mark P. Page
Regional Engineer

cc: Richard Perkins

Enclosures
MPP/mjk

APPLICATION FOR TEMPORARY CHANGE OF WATER

RECEIVED
AUG

Rec. by
Fee Paid $
Receipt #
Microfilmed
Roll #

STATE OF UTAH

For the purpose of obtaining permission to make a temporary change of water in the State of Utah, application is hereby made to the State Engineer, based upon the following showing of facts, submitted in accordance with the requirements of Section 73-3-3 Utah Code Annotated 1953, as amended.

*WATER RIGHT NO. 09 - 169 *APPLICATION NO. t 20344

Changes are proposed in (check those applicable)
___ point of diversion. X place of use. X nature of use. X period of use

1. OWNER INFORMATION
   Name: Montezuma Well Service *Interest: %
   Address: P.O. Box 540
   City: Montezuma Creek State: Utah Zip Code: 84534

2. *PRIORITY OF CHANGE: May 5, 1953 *FILING DATE: August 30, 1996

3. RIGHT EVIDENCED BY: 09-169 (A24863) Cert. No. 6249
   Prior Approved Temporary Change Applications for this right: 84-09-13; 88-09-01; 88-09-02; 91-09-03; t18235; t19756

********** HERETOFORE **********

4. QUANTITY OF WATER: 1.199 cfs and/or ___ ac-ft.
5. SOURCE: Underground Water Well
6. COUNTY: San Juan
7. POINT(S) OF DIVERSION: 1) N. 2350 ft. & W. 444 ft. from SE Cor. Sec. 12, T38S, R24E, SLB&M;
   2) N. 1946 ft. & E. 1152 ft.;
   3) N. 1651 ft. & E. 2236 ft.;
   4) N. 917 ft. & E. 2414 ft.; all from SW Cor. Sec. 7, T38S, R25E, SLB&M
   Description of Diverting Works:

8. POINT(S) OF REDIVERSION
   The water has been rediverted from ___ at a point:
   Description of Diverting Works:

9. POINT(S) OF RETURN
   The amount of water consumed is 1.199 cfs or ___ ac-ft.
   The amount of water returned is ___ cfs or ___ ac-ft.
   The water has been returned to the natural stream/source at a point(s):

*These items are to be completed by the Division of Water Rights.

10. NONCONSUMPTIVE PERIOD OF USE

Irrigation: From May 1 to October 31

Stockwatering: From January 1 to December 31

Domestic: From ____ to ____

Municipal: From ____ to ____

Mining: From ____ to ____

Power: From ____ to ____

Other: From ____ to ____

11. PURPOSE AND EXTENT OF USE

Irrigation: 136.0 acres. Sole supply of ____ acres.

Stockwatering (number and kind): 2000 Sheep, 56 Cows, 7 Horses

Domestic: ____ Families and/or ____ Persons.

Municipal (name): ____

Mining: ____ Mining District in the ____ Mine

Ores mined: ____

Power Plant name: ____ Type: ____ Capacity: ____

Other (describe): ____

12. PLACE OF USE

Legal description of place of use by 40 acre tract(s):

E½SE¼ Sec. 12; E½NE¼ Sec. 13; both T38S, R24E, SLB&M;
SW¼ Sec. 7; NW¼ Sec. 18; both T38S, R25E, SLB&M.

13. STORAGE

Reservoir Name: ____ Storage Period: from ____ to ____

Capacity: ____ ac-ft. Inundated Area: ____ acres.

Height of dam: ____ feet.

Legal description of inundated area by 40 tract(s): ____

********** THE FOLLOWING CHANGES ARE PROPOSED **********

14. QUANTITY OF WATER: ____ cfs and/or 5.00 ac-ft.

15. SOURCE: Underground Water Well

Balance of the water will be abandoned: ____ , or will be used as heretofore: X

16. COUNTY: San Juan

17. POINT(S) OF DIVERSION: Same as heretofore

Description of Diverting Works: Portable pump & tank truck

*COMMON DESCRIPTION: 17 miles SE of Blanding Blanding South Quad

18. POINT(S) OF REDIVERSION

The water will be rediverted from ____ at a point:

Description of Diverting Works: ____

19. POINT(S) OF RETURN

The amount of water to be consumed is ____ cfs or 5.00 ac-ft.

The amount of water to be returned is ____ cfs or ____ ac-ft.

The water will be returned to the natural stream/source at a point(s):

20. NATURE AND PERIOD OF USE

Irrigation: From / / to / /
Stockwatering: From / / to / /
Domestic: From / / to / /
Municipal: From / / to / /
Mining: From / / to / /
Power: From / / to / /
Other: From 9 / 1 / 96 to 10/ 15/ 96

21. PURPOSE AND EXTENT OF USE

Irrigation: acres. Sole supply of acres.
Stockwatering (number and kind):
Domestic: Families and/or Persons
Municipal (name):
Mining: Mining District at the Mine
Ores mined:
Power: Plant name: Type: Capacity:
Other (describe): Exploration drilling, road construction & maintenance, and other related uses

22. PLACE OF USE

Legal description of place of use by 40 acre tract(s):
1) Petral Exp. #2 Knockdhu Unit: NW¼SE¼ Sec. 33, T37S, R25E, SLB&M.

23. STORAGE

Reservoir Name: Storage Period: from to
Capacity: ac-ft. Inundated Area: acres.
Height of dam: feet.
Legal description of inundated area by 40 tract(s):

24. EXPLANATORY

The following is set forth to define more clearly the full purpose of this application. Include any supplemental water rights used for the same purpose. (Use additional pages of same size if necessary):
The applicant is purchasing this water from the owner of the right, Richard Perkins, of Blanding.

****

The undersigned hereby acknowledges that even though he/she/they may have been assisted in the preparation of the above-numbered application through the courtesy of the employees of the Division of Water Rights, all responsibility for the accuracy of the information contained herein, at the time of filing, rests with the applicant(s).

Earl Martin

Signature of Applicant(s)

STATE ENGINEER'S ENDORSEMENT

PERMANENT CHANGE APPLICATION NUMBER: t20344 WATER RIGHT NUMBER:

1. August 30, 1996 Change Application received by MP.

2. August 30, 1996 Application designated for APPROVAL by MP.

3. Comments:

Conditions:

This application is hereby APPROVED, dated August 30, 1996, subject to pri... rights and this application will expire on October 15, 1996.

Mark Page, Regional Engineer
for
Robert L. Morgan, State Engineer

Aug. 26 1996

RECEIVED
[illegible]
WATER RIGHTS

Utah State Division of
Water Rights

Dear Sirs

I agree to let Montezuma
Well service of Montezuma Creek
Utah use water from Wells
at my Ranch - Montezuma Creek.
Cert. # 6249.

Yours truly
Richard

APPROVED COPY

SAN JUAN COUNTY ROAD DEPARTMENT
838 East Highway 666
Post Office Box 188
Monticello, Utah 84535
(801) 587-2230

Application for Right-of-Way Encroachment Permit

Date July 17, 1996

TO: San Juan County Surveyor/Engineer
Post Office Box 188
Monticello, Utah 84535

Application is hereby made by: (1) Petral Exploration, LLC
c/o McIlnay & Associates, Inc.
Address (2) ~~2305 Oxford Lane, Casper, WY 82604~~
Telephone Number (307) 265-4351 for permission to do the following: (3) Move in a drilling rig and other equipment as needed for drilling, completing and producing a well located in the NW-SE Sec. 33-T37S-R25E, SAn Juan Co., UT utilizing County Roads 206 and 347.

(4) Location:
As above

City Blanding County San Juan State UT
or U.S. Highway No. NA Milepost No. NA in accordance with the attached plan. (5)

(6) Construction will begin on or about NA 19___ and will be completed on or before ___ 19___.

If the proposed installation requires breaking of the pavement, give the following information:

a. Type of pavement: NA

b. The opening to be made will be _____ feet long by _____ feet wide and _____ feet deep.

c. A bond in the amount of $_____ has been posted with _____ Telephone No. _____ to run of a term of three (3) years after completion of work to guarantee satisfactory performance.

(7) If this permit is granted, we agree to comply with all conditions, restriction, and regulations as contained in the "Regulations for the Control and Protection of State Highway

Rights-of-Way", approved by the Utah State Road Commission of October 8, 1982, and all revisions thereto or Regulations adopted by the San Juan County Commission.

(8) In approving this application and locations of utilities, and effort will be made to approve only locations that will not be affected in the event that San Juan County changes the roadway. But, in situations in which the utility has to be moved, this moving shall be done by the utility company or paid for by the company.

(9) For any and all applications requesting authority to use vibratory equipment, applicants shall:

a. Provide map showing where vibrations will take place.

b. Agree to repair any damages or replace any property damaged.

c. Take full responsibility for proper flagging and traffic control.

d. Agree that vibrating done in the area of dirt roads shall be done on the dirt road rather than in the bar ditch to minimize damage.

e. Provide a schedule of the planned work and estimated dates of completion.

f. Attach written permission from all adjacent fee-title owners.

g. The San Juan County commission has authorized the San Juan County Surveyor/Engineer (or his Assignees) to issue permits.

(10) San Juan County can only grant permission to the extent that the County has the authority to do so and the permission granted hereunder is limited to the interest of authority actually owned by San Juan County and no warrantion of ownership or authority to grant permission is expressed or implied by the granting of this permit.

BY: Ken Kidneigh, McIlnay & Associates, Inc.
Representative for Petral Exploration, LLC
TITLE

To be filled in by San Juan County Surveyor/Engineer.

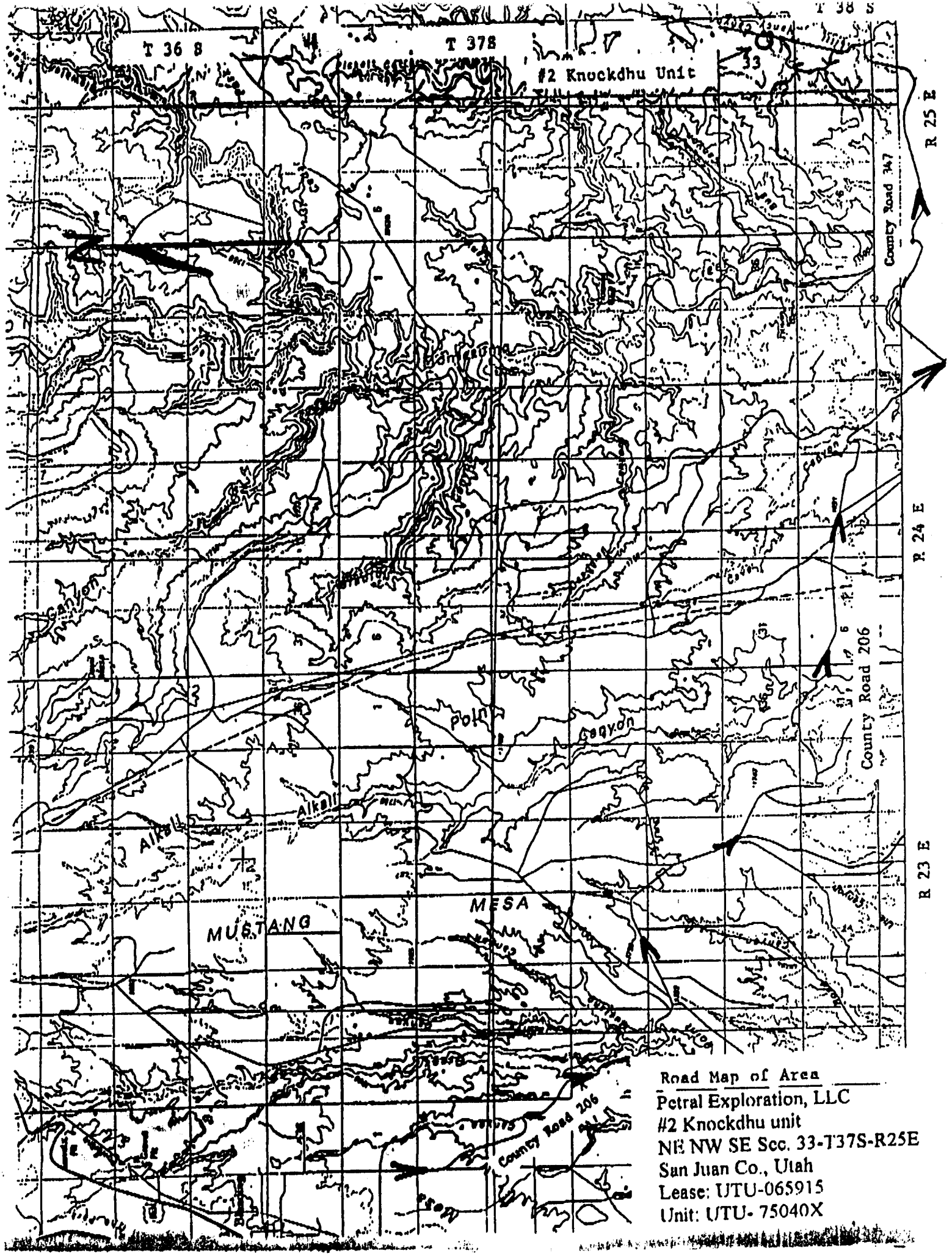
(1) Permit should be granted Yes

Permit should not be granted

(2) Additional requirements which should be imposed See Note

NOTE: Care should be taken to check road conditions due to weather. Damage caused, will be your responsibility.

Douglas E. Nelson
SAN JUAN COUNTY SURVEYOR/ENGINEER



Road Map of Area
Petral Exploration, LLC
#2 Knockdhu unit
NE NW SE Sec. 33-T37S-R25E
San Juan Co., Utah
Lease: UTU-065915
Unit: UTU- 75040X

Casing Accessories
Guide Shoe
Insert Float Valve
1 Clamp
9 Centralizers
1 Centralizer in center of the shoe joint.
1 Centralizer on 2nd collar
3 Centralizers - 1 every 4th collar
3 Centralizers - 1every 6th collar
1 Centralizer 3rd collar from the surface

Cementing Details
20 BW ahead. Mixed 640 sks. 65/35 G/Poz w/6% D-20, 2% CaCl, 1/4#/sk. Flocele. Tailed in w/200 sks. Reg. "G" w/1/4#/sk. Flocele, 2% CaCl. Washed up on plug. Last 15 Bbls. of slurry pumped at 1 BPM. Shut down and cement fell out of sight. Waited 2 Hrs. and ran 1" to 120'. Cemented w/75 sks. Reg. cement w/2% CaCl.
Good returns. (205 sks to pit). Bumped plug w/500 psig. Plug down @ 1:30 AM.

Geo: Sand & Shale Chinle Top 1560'

9-6-96 **5 days from spud**
Depth: 1804' - made 126' in 4 1/4 Hrs. Cum. Drlg. Hrs. 78 3/4 Hrs.
Status. Drilling
Hours:

4 1/4	Drilling
1	Tripping
1/4	Survey
1/2	Circulating
7	WOC
4 1/2	BOP test
2	Wait on BOP tester
3	Weld head on
1 1/2	Drilling plug

BIT: 4. 7 7/8", Reed HP51, SNR109833. In @ 1678' - made 126' in 4 1/4 Hrs. Jets 12-12-B
Survey: 1 1/2° @ 1795' True S-87W, (Mag. S75W)
Mud: Wt. 8.4, Vis. 27, WL NC, pH 9, Calcium 250, Chlorides 500
BHA: Bit, IBS, 1 Monel, 20-6 1/6" DC, 5 Jts. WT pipe = 771.84'
32,000#, RPM - 80, Pump - 1500 PSI, GPM 300, AVDP/AVDC 179/297
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
Details: Cut casing off and weld on head. Test weld to 1000 psig. Nippled up BOP. Tested BOP (pipe and blind rams), choke manifold, kelly cock, and safety valves to 3000 psig for 10 min. Tested Hydrill to 1500 psig for 10 min. Tested casing to 2000 psig for 30 min. All tested okay. Test witnessed by Jeff Brown, BLM.

Picked up monel collar, bottom hole assembly and resumed drilling. Tagged cement @ 1631', drilled 47' cement and continued drilling operations.
Geo: Sand & Shale
Costs: Daily Cost: $ 5,978 Cum. Cost: $ 94,480 Rem. AFE: $ 284,010

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR Petral Exploration, LLC

ADDRESS c/o McIlnay & Associates, Inc.
2305 Oxford Lane, Casper, WY 82604

OPERATOR ACCT. NO. N 7700

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
B		11890	43-037-31779	Knockdhu Unit #2	NW SE	33	37S	25E	San Juan	9-1-96	

WELL 1 COMMENTS:
Within Knockdhu Unit No. 75040X Entity added 9-9-96. Lc

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

RECEIVED
SEP 09 1996
DIV. OF OIL, GAS & MINING

Signature Sharon Ann
McIlnay & Associates, Inc.
Consulting Engineers 9-4-96
Title Date

Phone No. (307) 265-4351

RECEIVED
SEP 1 1 1996
DIV. OF OIL, GAS & MINING

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
   [XX] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator
   Petral Exploration, LLC
3. Address and Telephone No. c/o McIlnay & Associates, Inc. 2305 Oxford Lane, Casper, WY 82640 (307) 265-4351
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
   (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

5. Lease Designation and Serial No.
   UTU-065915
6. If Indian, Allottee or Tribe Name
   NA
7. If Unit or CA, Agreement Designation
   Knockdhu Unit 75040X
8. Well Name and No.
   2
9. API Well No.
   43-037-31779
10. Field and Pool, or Exploratory Area
   Unnamed
11. County or Parish, State
   San Juan Co., UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[XX] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[XX] Other Start drilling opr.	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well was spudded 9-1-96. 13 3/8" conductor casing was set @ 85' and cemented w/100 sks cement. Surface casing (8 5/8") was set at 1678.85' KB and cemented with 840 sks cement. 1" pipe was ran to 120' and cemented with 75 sks. cement.

BOP tested as follows:
Tested pipe and blind rams, choke manifold, kelly cock, and safety valves to 3000 psig for 10 min. Tested Hydrill to 1500 psig for 10 min. Tested casing to 2000 psig for 30 min. All tested okay.

Test witnessed by Jeff Brown, BLM.

14. I hereby certify that the foregoing is true and correct
Signed [signature] McIlnay & Associates, Inc. Title Consulting Engineers Date 9-6-96

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: September 13, 1996
pages: 4 , including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...
Sharon Orr

McIlnay & Associates, Inc.
7305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

Daily Drilling Reporta

Petral Exploration, LLC — September, 1996
Kknockdhu Unit #2, UTU-065915, San Juan Co., UT — Page 4

9-7-96 **6 days from spud**
Depth: 2980' - made 1176' in 21 1/4 Hrs. Cum. Drlg. Hrs. 69 3/4 Hrs.
Status: Drilling
Hours: 21 1/4 Drilling
2 1/4 Survey
1/2 Rig service
BIT: 4, 7 7/8", Reed HP51, SN-R109832, In @ 1678' - made 1302' in 25 3/4 Hrs.
Jets 12-12-B
Survey: 1° @ 1885' True S84W, (Obs. S72W), 1° @ 2009' True S84W, (Obs. S72W)
1/2° @ 2133' True N30W, (Obs. N42W), 3/4° @ 2257' True N20W, (Obs. N32W)
1° @ 2383' True N01W, (Obs. N13W), 1/4° @ 2541' True N12W, (Obs. N24W)
Mud: Water
BHA: Bit, IBS, 1 Monel, 20-6 1/6" DC, 5 Jts. WT pipe = 771.84'
35,000#, RPM - 80, Pump - 1500 PSI, GPM 300, AVDP/AVDC 179/297
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
Details: Picked up waterflow of 1 1/2" stream @ 2893 - 2933'. Drilling ahead with water flow.
Geo: Sand & Shale

9-8-96 **7 days from spud**
Depth: 3735' - made 755' in 19 Hrs. Cum. Drlg. Hrs. 88 3/4 Hrs.
Status: Drilling
Hours: 19 Drilling
1/2 Wash & Ream
3 1/2 Tripping
1/2 Survey
1/2 Rig service
BIT: 4, 7 7/8", Reed HP51, SN-R109832, In @ 1678' - out @ 3075' - made 1397' in 29.5 Hrs.
Jets 12-12-B, 47.5'/Hr., T4-B2-In gauge
5, 7 7/8", Smith E2H, SN-LE3449, In @ 3075' - made 655' in 16 3/4 Hrs.
Jets 12-12-B, 39.1'/Hr.
Survey: 3/4° @ 3070' True S76E, (Obs. S88E), 3/4° @ 3535' True N11W, (Obs. N23W)
Mud: Wt., 8.7, Vis. 28,
BHA: Bit, IBS, 1 Monel, 20-6 1/6" DC, 5 Jts. WT pipe = 771.84'
40,000#, RPM - 75, Pump - 1700 PSI, GPM 300, AVDP/AVDC 148/246
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
SLM: Board 3078 - Talley 3079 Made -1' correction
Details: 3/4" water flow between connections.
Geo: Cutler Sand

9-9-96 **8 days from spud**
Depth: 4518' - made 783' in 23 Hrs. Cum. Drlg. Hrs. 112 Hrs.
Status: Drilling
Hours: 23 Drilling
1/2 Survey
1/2 Rig service
BIT: 5, 7 7/8", Smith E2H, SN-LE3449, In @ 3075' - made 1443' in 39 3/4 Hrs.
Jets 12-12-B, 36.3'/Hr.
Survey: 3/4° @ 4037' True N47E, (Obs. N35E),
Mud: Wt., 8.7, Vis. 27,
BHA: Bit, IBS, 1 Monel, 20-6 1/6" DC, 5 Jts. WT pipe = 771.84'
40,000#, RPM - 75, Pump - 1800 PSI, GPM 300, AVDP/AVDC 168/246
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
Details: 1/2" water flow. Mud loggers on location @ 4000'.
Accident Report: Mike Arogon. While trip in hole 9-7-96, left knee was mashed between stand pipe being latched on to joint in V-door. Witnesssed by driller, Jim Campbell
Geo: Honaker Trail - 4414' - 4000 - 4510' - BG 2-6 Units
4000-4420' - 100% shale, 4420-4510 - 70-80% shale & 20-30% limestone

9-10-96 **9 days from spud**
Depth: 5065' - made 547' in 22 1/4 Hrs. Cum. Drlg. Hrs. 134 1/4 Hrs.
Status: Drilling
Hours: 22 1/4 Drilling
1 Survey
3/4 Rig service & BOP
BIT: 5, 7 7/8", Smith E2H, SN-LE3449, In @ 3075' - made 1990' in 44 1/2 Hrs.
Jets 12-12-B, 44.7'/Hr.
Survey: 3/4° @ 4557' True N2 E, (Obs. N10W),
Mud: Wt., 8.7, Vis. 28, Calcium 640, Chlorides 12,400
BHA: Bit, IBS, 1 Monel, 20-6 1/6" DC, 5 Jts. WT pipe = 771.84'
40,000#, RPM - 75, Pump - 1800 PSI, GPM 300, AVDP/AVDC 168/246
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
Kill Rate - 53 SPM @ 750 psig
Geo: See Decollement Report

Costs: Daily Cost: $ 11,563 Cum. Cost: $ 161,502 Rem. AFE: $ 220,989

9-11-96 **10 days from spud**
Depth: 5335' - made 237' in 14 3/4 Hrs. Cum. Drlg. Hrs. 149 Hrs.
Status: Drilling & mudding up @ 6 AM
Hours: 14 3/4 Drilling
5 1/2 Tripping
3/4 Survey
2 1/2 Rig Repair - welded union on stand pipe
1/2 Rig service
BIT: 5, 7 7/8", Smith E2H, SN-LE3449, In @ 3075' - out @ 5098 - made 2023' in 47 1/2 Hrs.
Jets 12-12-B, 42.5'/Hr., T6-B4-1/8 out
6, 7 7/8", Reed HP-53P, SN T-41318, In @ 5098' - made 237' in 11 3/4 Hrs.
Jets 13-13-15, 20.1'/Hr.
Survey: 1° @ 5058' True N54 E, (Obs. N42E),
Mud: Wt., 8.7, Vis. 28, Calcium 500, Chlorides 13,000
BHA: Bit, IBS, junk basket, bit sub, monel, 20-6 1/4" DC, 5 Jts. Wt. Pipe = 774.64
40,000#, RPM - 75, Pump - 1500 PSI, GPM 300, AVDP/AVDC 168/246
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
Kill Rate - 49 SPM @ 500 psig
Details: Drilling w/polymer sweeps. Reamed 150' to bottom. Water flow dead @ 5288'.
Geo: See Decollement Report
Costs: Daily Cost: $ 7,314 Cum. Cost: $ 168,815 Rem AFE: $ 213,675

9-12-96 **11 days from spud**
Depth: 5507' - made 172' in 11 1/4 Hrs. Cum. Drlg. Hrs. 163 1/4 Hrs.
Status: Drilling & mudding up @ 6 AM
Hours: 11 1/4 Drilling
1 Tripping
7 1/4 Waiting on core hand
1/2 Survey
1/2 Rig service
BIT: 6, 7 7/8", Reed HP53P, SN T-41318, In @ 5098' - made 409' in 23 Hrs.
Jets 13-13-15, 17.7'/Hr.,
Survey: 3/4° @ 5507' True N57E, (Obs. N45E),
Mud: Wt., 9.4, Vis. 43, WL 8.4, FC 2/32, pH 11, PV 14, YP 6, Gels 3/9, Alk. Pf/Mf 7/2.0
Solids 8, Sand Nil, Calcium 340, Chlorides 10,500
BHA: Bit, junk basket, bit sub, monel, 20-6 1/4" DC, 5 Jts. Wt. Pipe = 774.64
40,000#, RPM - 60-75, Pump - 1550 PSI, GPM 300, AVDP/AVDC 168/348
Pump #1 - 6 x 8, 102 SPM, Pump #2 6 x 8
Kill Rate @ 5475 - 50 SPM @ 600 psig
Details: During short trip well began to flow. Raised mud weight from 9.1#/gal to 9.4#/gal. Water flow dead. At 7 AM tripped out of hole to pick up core barrel (report time 6 AM). Waited on core hand 7 1/4 Hrs.. Could not locate core hand. Motel in Blanding was ringing wrong room number.

9-13-96 **12 days from spud**

Depth: 5567' - made 60' Coring in 5 Hrs. Cum. Drlg. Hrs. 163 1/4 Hrs.

Status: Tripping in hole w/DST #1

Hours:

5		Coring
10	1/2	Tripping
	1/2	Wash & ream
1	1/4	Circulating
	1/4	Rig Service
1	1/4	Make up Core Bbl.
1	1/2	Lay down core
2	1/4	Pick up DST tools
1	1/2	Cut drilling line

BIT: 7, 7 27/32 Chris. Core Bbl., ARC-325, SN 1900309, In @ 5507' - out @ 5567' - made 67' in 5 Hrs. 12'.Hr.

Mud: Wt., 9.5, Vis. 44, WL 9, FC 2/32, pH 10.5, PV 13, YP 8, Gels 3/9, Alk. Pf/Mf .5/1.3 Sand Nil, Calcium 360, Chlorides 10,400

BHA: Core #1 - Bit, core, safety Jt., Jars, xo sub, 20 DC's, 5 Jts. Wt. Pipe
DST #2 - Test tools, 20 DC, 5 Jts. Wt. pipe
12,000#, RPM - 90, Pump - 850 PSI,
Pump #1 - 6 x 8, Pump #2 6 x 8

SLM: Board - 5507.30' Talley 5507.00 - No correction

Details: Tripped in hole, slipped and cut drilling line. Circulated 20' bottom. Ran Core #1 - 5507 - 5567 - Upper Ismay. Cut 60.5' core. TOH and laid down core. Picked up DST tools and tripped in hole to run DST #1 5522 - 5567'. No water flow

Geo: See Decollement Report

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: September 20, 1996
pages: 4 , including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

9-14-96 **13 days from spud**
Depth: 5567' - made 0' Cum. Drlg. Hrs. 165 Hrs.
Status: Wait on daylight to pull DST
Hours: 23 Testing
1 Tripping
Mud: Wt., 9.5, Vis. 44, WL 9, FC 2/32, pH 10.5, PV 13, YP 8, Gels 3/9, Alk. Pf/Mf .5/1.3 Sand Nil, Calcium 360, Chlorides 10,400, Nitrates 90 ppg
BHA: DST #2 - Test tools, 20 DC, 5 Jts. Wt. pipe
Pump #1 - 6 x 8, Pump #2 6 x 8
Details: Tripped in hole and ran DST #1. Waited on daylight to trip out with test.

9-15-96 **14 days from spud**
Depth: 5629' - made 62' Coring, Cum. Drlg. Hrs. 165 Hrs.
Status: Tripping out w/Core #2.
Hours: 4 1/2 Circulating
13 1/2 Tripping
2 Lay down test tools
1/2 Pick up core
3 1/2 Coring
BIT: 8, 7 7/8", Reed (RR) HP-53P, SN T-41318, In @ 5563' - conditioning hole, Jets 13-13-15,
9, 7 27/32 Chris. Core Bbl., ARC-325, SN 1900309, In @ 5567' - out @ 5629' - made 62' in 3 1/2 Hrs.
Mud: Wt., 9.5, Vis. 42, WL 9.5, FC 2/32, pH 10, PV 12, YP 8, Gels 3/9, Alk. Pf/Mf .3/.8 Sand Tr, Calcium 360, Chlorides 11,000, Nitrates 80
BHA: Bit, bit sub, 20-6 1/4" DC, 5 Jts. Wt. Pipe
Core #2 - Bit, core, Jars, 20 DC's, 5 Jts. Wt. Pipe
12,000#, RPM - 90, Pump - 900 PSI, 200 GPM
Pump #1 - 6 x 8 - 86 SPM, Pump #2 6 x 8
SLM: Board - 5565.59' Talley 5567.20 - 1.61 difference - No correction
Details: Unseated packer and TOH w/DST #1. TIH w/bit #8 (RR 6). Reamed core hole, circulated and conditioned mud. TOH and picked up core. TIH and conditioned 5567 - 5629' Upper Ismay Mound.
Geo: 5536' - Upper Ismay Anhydrite, 5544' Upper Ismay Mound

DST #1, Upper Ismay, 5522 - 67'

IH	2809 psig		
IF	83 - 93 psig	30 min.	Opened w/1" blow, inc. to strong off bottom of bucket (12.8 psig)
ISI	1763 psig	60 min.	GTS during SI in 6 min. Died off to 0.
FF	67 to 94 psig	240 min.	3 psig flow inc. to 10 psig in 3 min. Died in 7 min. At end of flow recorded 2.9 psig flow. Gas was flared. Volume TSTM
FSI	2145 psig	1020 min.	Flare out in 3 Hrs. after SI.
FH	2792 psig		
BHT	131° F		

Recovery: 80' gas cut mud; 203' gas cut mud w/trace of oil.
Sample Chamber: 0.37 cu. ft. gas and 200 cc drilling mud.
Filtrate 0.339 -m @ 60°±. Pit mud filtrate 0.339 -m @ 60°±
Remarks: Tools pulled loose and free @ 6 AM. Waited on daylight to trip out of hole w/DP.

9-16-96 **15 days from spud**
Depth: 5629' - made 0' Cum. Drlg. Hrs. 168 Hrs.
Status: Trip out with test tool
Hours: 1 1/2 Circulating
15 1/2 Tripping
3/4 Wash & ream.
1 1/4 Pick up core
3/4 Lay down Core
3 1/2 Pick up test tools
3/4 Cut drilling line

BIT: 10, 7 7/8 Reed (RR 8) H530, SN T-41318, Reaming core hole 5567 - 5629
Mud: Wt., 9.7, Vis. 45, WL 9, FC 2/32, pH 10, PV 15, YP 8, Alk. Pf/Mf .3/.9, Solids 7, Sand Tr, Calcium 340, Chlorides 11,900
BHA: DST #2 - Test tools, 20 DC, 5 Jts. Wt. pipe
Pump #1 - 6 x 8, Pump #2 6 x 8
SLM: Board - 5586.41' Talley 5588.72' - No correction
Details: TOH w/core. Cut 62'. Laid down core . Picked up test tools for DST #2. Tagged 62' high. TOH w/test tools - strapped out w/no correction. TIH and reamed core hole 5567 - 5629'. Conditioned mud. TOH to pick up test tool. TIH for rerun of DST #2. On bottom @ 6:30 AM.
Geo: See Decollement Report

9-17-96 **16 days from spud**
Depth: 5711' - made 82' in 9 Hrs. Cum. Drlg. Hrs. 177
Status: Drilling
Hours:

9	Drilling
5 1/4	Tripping
1/4	Wash & ream
1/4	Rig Service
6 1/2	Run DST
3/4	Reverse out

BIT: 11, 7 7/8 Smith F3H LH-3316, In @ 5629' - made 82' in 9 Hrs.
Jets 13-13-B
Mud: Wt. 10.9, Vis. 56, WL 13, FC 2/32, pH 10.5, PV 19, YP 18, Gels 6/21, Alk. Pf/Mf .5/.9, Solids 14, Sand Nil, Calcium 480, Chlorides 14,000, Nitrates 40
BHA: Bit, bit sub, 19-6 1/4" DC, 5 jts. Wt. Pipe = 712.42'
Pump #1 - 6 x 8 - 102 SPM, Pump #2 6 x 8
40,000#, RPM - 75, Pump - 1500 PSI, 300 GPM, AVDP/AVDC 168/242
Details:

DST #2, Ismay Mound, 5564 - 5629'

IH	2914 psig		
IF	101 - 157 psig	30 min.	Opened w/2" blow, in 2 min. 6 psig in 13 min.
ISI	1512 psig	60 min.	Flow decreased to 0 psig
FF	113 to 263 psig	120 min.	GTS in 30 min. 5.2 psig inc. to 7.2 psig. Small flare of gas TSTM
FSI	1725 psig	120 min.	Small flare - out in 1 Hr.
FH	2905 psig		
BHT	126° F		

Recovery: Total of 558' or 2.76 Bbls. - 486' heavy gas cut mud slightly oil cut (0.44Bbl) & 90' heavy gas cut mud and water - 62,000 ppm water.
Sample Chamber: 180 psig gas, 200 cc oil, 100 cc mud & 850 cc water
Water - 74,000 ppm chlorides, 0.65 cu. ft. gas, 10 ppm nitrates in samples.
Gravity - 40.4° API, GOR 516 cu. ft./Bbl.
Will send gas sample in for analysis.
Geo: See Decollement Report

9-18-96 **17 days from spud**
Depth: 5871' - made 160' in 17 3/4 Hrs. Cum. Drlg. Hrs. 194
Status: Trip out to log
Hours:

17 3/4	Drilling
3 1/4	Tripping
2 1/2	Circulating
1/4	Rig Service
1/4	Survey

BIT: 11, 7 7/8 Smith F3H LH-3316, In @ 5629' - out @ 5871' - made 242' in 26 3/4 Hrs.
Jets 13-13-B, 9.23'/Hr.
Mud: Wt. 10.9, Vis. 60, WL 9, FC 2/32, pH 11.5, PV 21, YP 23, Gels 8/30, Alk. Pf/Mf 1.9/3.1, Solids 14, Sand Nil, Calcium 300, Chlorides 16,000,
BHA: Bit, bit sub, 19-6 1/4" DC, 5 jts. Wt. Pipe = 712.42'
40,000#, RPM - 75, Pump - 2000 PSI, 300 GPM, AVDP/AVDC 168/242
Pump #1 - 6 x 8 - 102 SPM, Pump #2 6 x 8
Kill rate: 525 psig @ 42 SPM

9-19-96 **18 days from spud**
Depth: 5871' - Cum. Drlg. Hrs. 194
Status: WOO
Hours: 2 Tripping
11 Logging
11 WOO
Mud: Wt. 10.9, Vis. 60, WL 9, FC 2/32, pH 11, PV 21, YP 23, Gels 8/30, Alk. Pf/Mf 1.9/3.1, Solids 14, Sand Nil, Calcium 300, Chlorides 16,000,
Pump: Pump #1 - 6 x 8 - 102 SPM, Pump #2 6 x 8
SLM: Board - 5871' Talley 5871' - None
Details: SLM out of hole. Laid core down out of derrick. TIH to log. Ran Schlumberer Platform Express AIT: HILTC, SDF/GR & FMI/GR and BHCS.

9-20-96 **19 days from spud**
Depth: 5871' - Cum. Drlg. Hrs. 194
Status: Nippling down
Hours: 3 1/4 Nipple down
5 Lay down
16 3/4 WOO & circulate
BIT: 11, 7 7/8 Smith F3H LII-3316, In @ 5871' - out @ 5871' - circulate & condition hole
Mud: Wt. 9.7, Vis. 50, WL 7, FC 2/32, pH 9.5, PV 12, YP 16, Gels 5/14, Alk. Pf/Mf .3/.7, Solids 10, Sand Nil, Calcium 280, Chlorides 10,800,
Pump: Pump #1 - 6 x 8 - 102 SPM,
Details: WOO and tripped in hole w/bit and DC. Circulated and conditioned mud - lowered mud weight to 9.7. Added 20 sks. Magna Fiber to system. Laid down DP & DC and nippled down BOP. Pumped 375 Bbls. 10.9# mud to 400 Bbl. frac tank for storage.

Will install a replacement BOP on wellhead, secure, shut-in well and temporarily suspend operations for additional evaluation. BLM (Jeff Brown) gave verbal permission.

Elevations: **5437' KB** **5425'GL**

Formation Tops

Honaker Trail	4432'
La Sal	5192'
Paradox Shale	5474'
Upper Ismay	5499'
Upper Ismay massive anhydrite	5529'
Upper Ismay carbonate	5535'
Hovenweep Shale	5623'
Lower Ismay	5669'
Lower Ismay anhydrite	5687'
Lower Ismay carbonate	5710'
Gothic Shale	5721'
Upper Desert Creek	5741'
Upper Desert Creek anhydrite	5741'
Upper Desert Creek carbonate	5766'
Lower Desert Creek	5774'
Lower Desert Creek anhydrite	5792'
Lower Desert Creek carbonate	5798'
Chimney Rock Shale	5816'
Akah	5836'
Total Depth	5871'

Water Flows

1960 - 1970'	1980 - 1990'
2115 - 2120'	2160 - 2170'
2190 - 2200'	2370 - 2280'
2390 - 2400'	2480 - 2540'
3300 - 3305'	3320 - 3335'
4690 - 4710'	5130 - 5145'

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REPORT NO. 139703

PAGE NO. 1

TEST DATE: 13-SEP-1996

S T A R

Schlumberger Transient Analysis Report

Based on Model Verified Interpretation
Of a Schlumberger Well Test

COMPANY: PETRAL EXPLORATION

WELL: KNOCKDHU #2 — DST #1

TEST IDENTIFICATION

Test Type	OPEN HOLE DST
Test No.	ONE
Formation	ISMAY
Test Interval (ft)	5525 to 5567
Depth Reference	KELLY BUSHING

WELL LOCATION

County	SAN JUAN
State	UTAH
Sec/Twn/Rng	33/37S/25E
Elevation (ft)	5437

HOLE CONDITIONS

Total Depth (MD/TVD) (ft)	5567
Hole Size (in)	7.875
Casing Size O.D. (in)	8.625 @ 1618'
Tested Interval/Net Pay (ft)	42 / 7

MUD PROPERTIES

Mud Type	F/W GEL & PAC
Mud Weight (lb/gal)	9.5
Filtrate Resistivity (ohm.m)	0.678 @ 60F
Filtrate Chlorides (ppm)	10400

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi)	2809
Gas Cushion Type	NONE
Surface Pressure (psi)	--
Liquid Cushion Type	NONE
Cushion Length (ft)	--

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in)	4884 / 3.82
Collar Length (ft)/I.D. (in)	589 / 2.25
Packer Depths (ft)	5525
Bottomhole Choke Size (in)	0.94
Gauge Depth (ft)/Type	5528/SLSR-777

NET PIPE RECOVERY

Volume	Fluid Type	Properties
80 ft	SLIGHT OIL &	
	GAS CUT MUD	Rw0.354@60F 21000ppm
203 ft	GAS CUT MUD	
	W/TRACE OIL	Rw2.936@60F 2200ppm

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.48 cuft	Gas	Corrected to Pwf
0.37 cuft	Gas	Meas.@S.C.Presr.
200 cc	Mud	Rw 0.339@60F 22000p
Pressure: 60	GOR:	GLR: 385

INTERPRETATION RESULTS

Model of Behavior	TWO-POROSITY
Fluid Type Used for Analysis	TOTAL LIQUID
Reservoir Pressure (psi)	2314 @ 5528 Ft
Transmissibility (md.ft/cp)	5.0 (Total)
Effective Permeability (md)	0.067 (to Oil)
(md)	0.008 (to Gas)
Skin Factor	-0.7
Storativity Ratio, Omega	0.0018
Interporos.Flow Coef.,Lambda	0.009
Radius of Investigation (ft)	13

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)	45 (Assumed)
Gas Gravity	0.65 (Assumed)
Gas/Liquid Ratio (scf/STB)	385
Water Cut (%)	0
Viscosity (cp)	1.13 (O) 0.012 (G)
Total Compressibility (1/psi)	4.024E-04
Porosity (%)	7
Reservoir Temperature (F)	131
Form.Vol.Factor (bbl/STB)	1.037 (O)
(bbl/SCF)	0.03113 (G)

PRODUCTION RATE DURING TEST: 4.2 BLPD = Q-Avg / 2.3 BLPD = Q-Last

COMMENTS:

DST #1 WAS A MECHANICALLY SUCCESSFUL TEST OF THE ISMAY FORMATION. ONLY THE FINAL SHUT-IN PERIOD WAS LONG ENOUGH FOR RESERVOIR EVALUATION. ANALYSIS OF THE FINAL BUILDUP INDICATES THE PRESENCE OF SKIN AND DECREASING WELLBORE STORAGE AT EARLY TIME AND TRANSITIONAL FLOW REGIME AT MID TO LATE TIMES, WITH A GENTLY INCREASING DERIVATIVE SLOPE AT THE END OF THE TEST. THE BUILDUP WAS MATCHED USING A TWO-POROSITY RESERVOIR MODEL WITH SKIN AND DECREASING WELLBORE STORAGE (SEE ANALYSIS RESULTS AND PLOTS, PAGES 2-6). BASED ON THE MATCH, THE BUILDUP RESPONSE WAS NEARING THE START OF INFINITE ACTING RADIAL FLOW AT THE END OF THE TEST. THE TESTED INTERVAL HAS THE CHARACTERISTICS OF VERY LOW EFFECTIVE PERMEABILITY AND A NON-DAMAGED WELLBORE CONDITION AT THE TIME OF THE TEST. FOR QUESTIONS ABOUT THIS REPORT, PLEASE CONTACT DEBORA HALLFORD AT (303) 843-9090.

CALCULATIONS
LIQUID WELL
LOG-LOG ANALYSIS

Schlumberger

LOG (DELTA P) VS. LOG (DELTA T) PLOT

TWO-POROSITY SYSTEM WITH TRANSIENT INTERPOROSITY FLOW
SKIN AND VARIABLE WELLBORE STORAGE
PD VS. TD/CD

DATA IDENTIFICATION

FLOW PERIOD # 2, BUILDUP
P = 94.540 PSI @ DELTA T=0
FLOW RATE CHANGE = 2.330 STB/D LIQUID

DOWNHOLE RATES (IN RESERVOIR BBL/D)

OIL ..... 2.416 (WITH Bo=1.037 BBL/STB)
FREE GAS ... 26.735 (WITH Bg=0.03113 BBL/SCF AND Rso=16.410 SCF/STB)

COMPUTED WITH PRODUCING WATER CUT = 0.000
AND PRODUCING GAS/LIQUID RATIO = 385.00 SCF/STB

TYPE-CURVE MATCH

CURVE MATCH, CD*E(2S) = 3.350
STORATIVITY RATIO, OMEGA = 1.802E-03
TRANSITION CURVE, LAMBDA*E(-2S) = 3.9778E-02
PRESSURE MATCH, PD/DELTA P = 0.001220 1/PSI
TIME MATCH, (TD/CD)/DELTA T = 4.225 1/HR

CALCULATIONS

K/MU (TOTAL) ..... 0.7174 MD/CP
KH/MU (TOTAL) ..... 5.022 MD.FT/CP
Ko (EFFECTIVE TO OIL) ..... 0.06701 MD
Kg (EFFECTIVE TO GAS) ..... 0.008086 MD
C ..... 3.506E-04 BBL/PSI
CD 14.759
LAMBDA 9.0277E-03
SKIN, S ..... -0.7414
RADIUS OF INVESTIGATION ... 13.196 FT (@ 8.13 HR)

OMMENTS

USING TWO-POROSITY (SLABS), INFINITE SYSTEM RESERVOIR MODEL WITH SKIN AND VARIABLE WELLBORE STORAGE:
Ca/C=1.21 CoD=0.565

Interpretation & Computing Services
Debora Hallford
Reservoir Analyst
6090 Greenwood Plaza Blvd.
Englewood, CO 80111
(303) 843-9090
(303) 486-3262 (Direct)
(303) 694-4690 (Fax)
(303) 779-4908 (Res.)

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REPORT NO. 139703
PAGE NO. 3

DIMENSIONLESS MULTI-RATE PLOT: LOG-LOG MATCH WITH TWO-POROSITY MODEL

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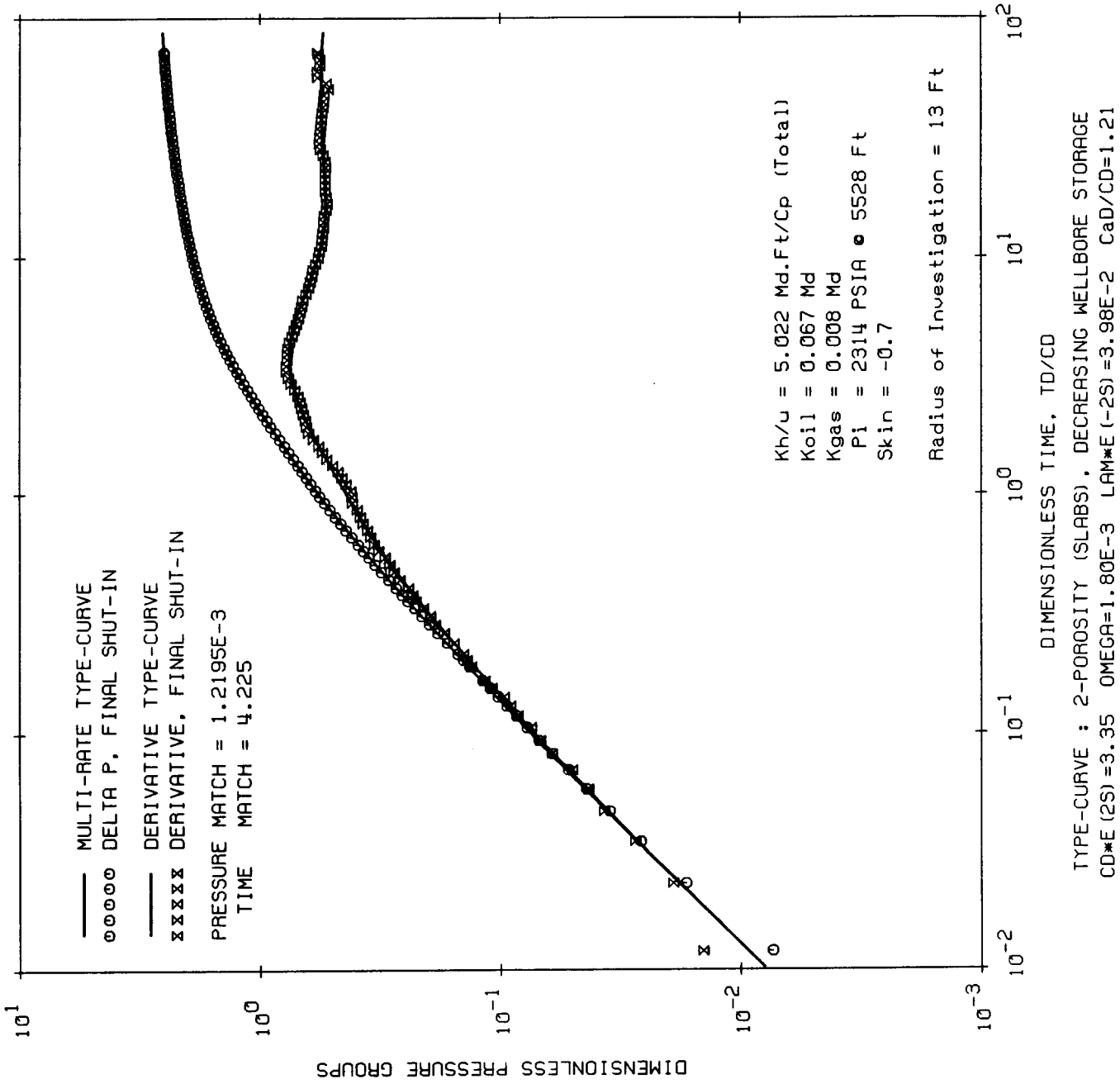

REPORT NO.
139703

PAGE NO. 4

DIMENSIONLESS SUPERPOSITION
PLOT WITH
TWO-POROSITY MODEL

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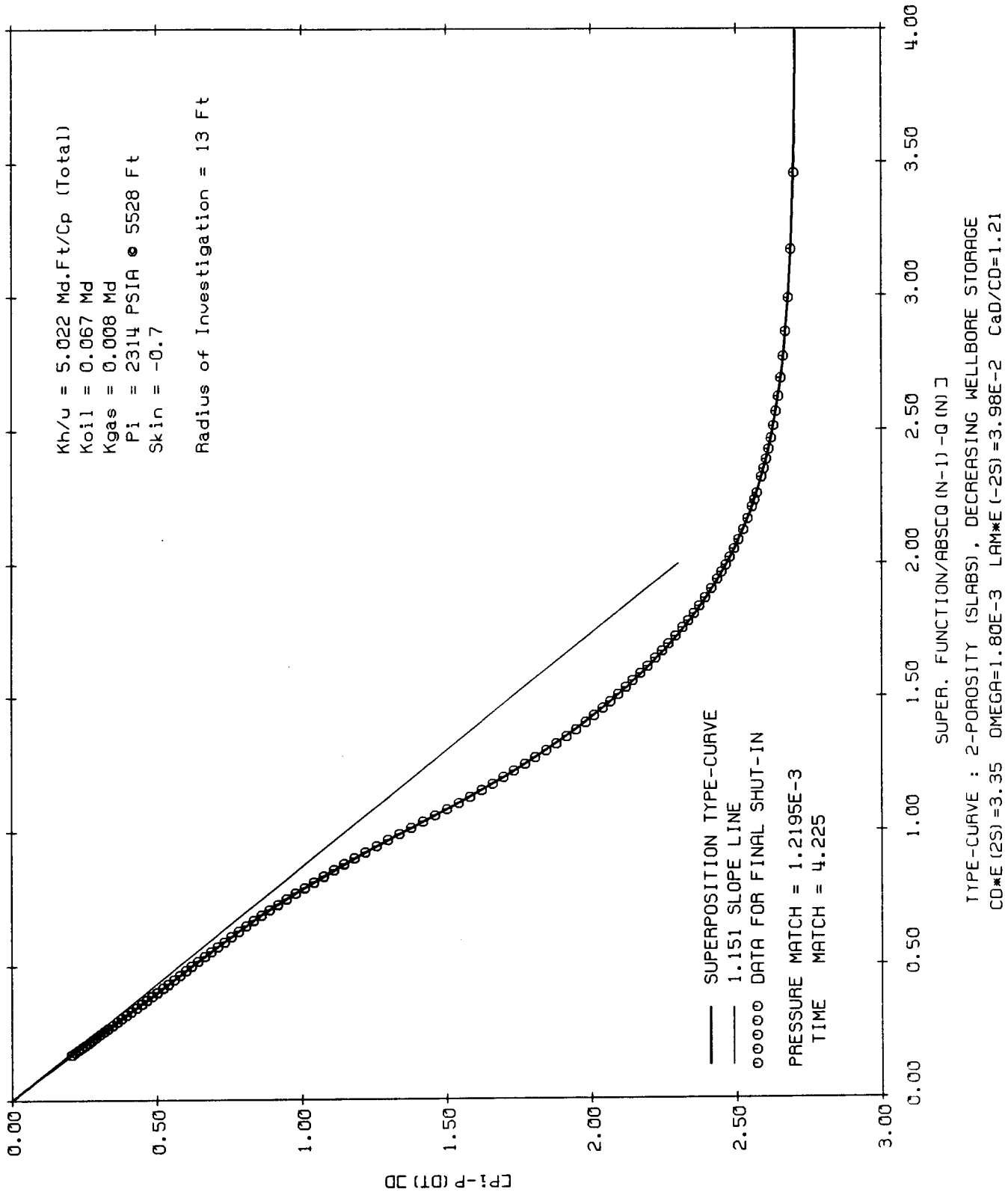
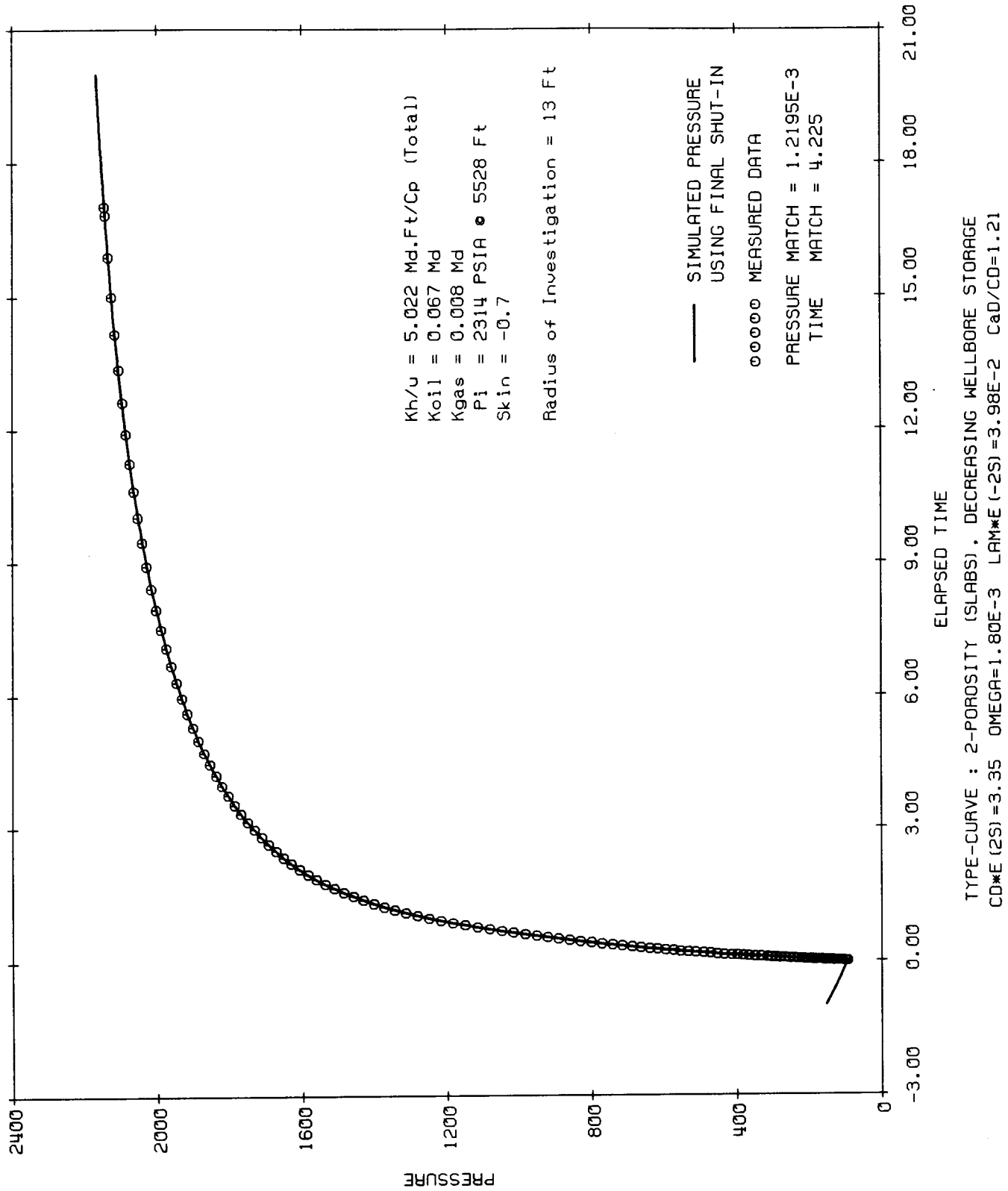


REPORT NO. 139703
PAGE NO. 5

PRESSURE HISTORY MATCH
WITH TWO-POROSITY MODEL

Schlumberger



FLOWRATE DATA
USED IN ANALYSIS
KNOCKDHU #2 - DST #1

Schlumberger

ET VS. FLOWRATE

USING CALCULATED LAST FLOWRATE AND EFFECTIVE PRODUCING TIME
PETRAL EXPLORATION - KNOCKDHU #2 - DST #1 - 13-SEP-1996

	ET (hrs) PRIOR TO FINAL SHUT-IN	TOTAL LIQUID FLOWRATE (BLPD)
1	-8.1300	2.3300
2	0.00000E-01	0.00000E-01

MODEL-VERIFIED(tm) REPORT

Schlumberger

THIS IS SCHLUMBERGER'S MODEL-VERIFIED(tm) INTERPRETATION REPORT. WITH MODEL-VERIFIED(tm) INTERPRETATION, THE GOAL OF THE SCHLUMBERGER ANALYST IS TO CONSTRUCT A TOTAL SYSTEM RESERVOIR MODEL THAT MATCHES ALL OF YOUR WELL TEST DATA. THIS PROVIDES YOU WITH RELIABLE ANSWERS THAT YOU CAN HAVE CONFIDENCE IN.

FROM THE DIAGNOSTIC LOG-LOG PLOT OF PRESSURE AND PRESSURE DERIVATIVE, THE SCHLUMBERGER ANALYST IDENTIFIES THE FLOW REGIMES GOVERNED BY THE INNER BOUNDARY CONDITIONS, BASIC RESERVOIR BEHAVIOR, AND OUTER BOUNDARY CONDITIONS. A RESERVOIR MODEL IS THEN CONSTRUCTED AND THE TEST DATA ARE MATCHED TO IT. IN ORDER TO VERIFY THE QUALITY OF THE MATCH, THE THEORETICAL MODEL RESPONSE (TYPE CURVE) AND THE TEST DATA ARE PLOTTED TOGETHER. THE PRESENTATION OF THE MATCH CAN BE SHOWN IN ANY OF THREE DIFFERENT FORMS.

1) LOG-LOG PLOT (DELTA PRESSURE AND DERIVATIVE vs. DELTA TIME)
2) SEMI-LOG PLOT (PRESSURE vs. SUPERPOSITION TIME)
3) CARTESIAN PLOT (PRESSURE vs. TIME)

SCHLUMBERGER USES SUPERPOSITION TECHNIQUES (MULTI-RATE ANALYSIS) TO ACCOUNT FOR THE WELL'S PRIOR PRODUCTION HISTORY. ESPECIALLY IN CASES WHERE THE PRIOR PRODUCTION IS ERRATIC OR UNUSUAL, SUPERPOSITION IS THE ONLY MEANS OF PROVIDING AN ACCURATE TYPE CURVE MATCH OF THE WELL TEST DATA. FOR GAS WELLS, THE PSEUDO-PRESSURE TECHNIQUE IS USED TO ACCOUNT FOR THE CHANGE IN GAS PROPERTIES WITH CHANGING PRESSURE.

IN SOME INSTANCES, THE WELL TEST DATA WILL NOT BE UNIQUE, i.e., MORE THAN ONE RESERVOIR MODEL WILL MATCH THE TEST DATA. THE MOST APPROPRIATE MODEL CAN BE DETERMINED AS WE WORK WITH YOU AND DISCUSS THE AREA LITHOLOGY AND GEOLOGY.

THE RESERVOIR ANSWERS DERIVED FROM MODEL-VERIFIED(tm) INTERPRETATION CAN INCLUDE; EFFECTIVE PERMEABILITY (K), SKIN DAMAGE (s), RESERVOIR PRESSURE (P*), FRACTURE HALF-LENGTH (Xf), FRACTURE CAPACITY (Kfw), BOUNDARY CONDITIONS AND DISTANCE TO BOUNDARIES, AS WELL AS THE MODEL OF BASIC RESERVOIR BEHAVIOR.

USING THE RESERVOIR MODEL DETERMINED BY MODEL-VERIFIED(tm) INTERPRETATION, FLOWRATE PREDICTIONS CAN BE MADE FOR THE WELL. ADDITIONALLY, WE CAN HELP YOU OPTIMIZE WELL PERFORMANCE BY USING SCHLUMBERGER'S NODAL ANALYSIS SOFTWARE TO EXAMINE THE WELL'S SENSITIVITY TO DIFFERENT COMPLETION DESIGNS (e.g., FRACTURE HALF-LENGTH, TUBING SIZE, WELLHEAD PRESSURE, SKIN VALUE, SHOT DENSITY). THIS AFFORDS YOU THE OPPORTUNITY TO FORECAST PRODUCTION POTENTIAL FOR THE WELL BEFORE MAKING FINAL COMPLETION/RECOMPLETION DECISIONS.

WELL TEST MODELS

THE SCHLUMBERGER ANALYST CONSTRUCTS THE TOTAL SYSTEM RESERVOIR MODEL THAT BEST MATCHES YOUR TEST DATA BY CHOOSING THE INNER BOUNDARY CONDITION(S), A BASIC RESERVOIR MODEL, AND THE OUTER BOUNDARY CONDITION(S). THESE COMPONENTS ARE PUT TOGETHER INTO ONE RESERVOIR MODEL AND THE TEST DATA IS MATCHED BY ADJUSTING THE MODEL PARAMETERS (e.g., PERMEABILITY AND SKIN) TO OBTAIN THE BEST FIT. THE FOLLOWING IS A PARTIAL LIST OF THE MODEL COMPONENTS AVAILABLE TO THE SCHLUMBERGER ANALYST FOR MATCHING YOUR WELL TEST DATA.

INNER BOUNDARY CONDITION

- NO WELLBORE STORAGE
- CONSTANT WELLBORE STORAGE
- VARIABLE WELLBORE STORAGE
- FINITE CONDUCTIVITY VERTICAL FRACTURE
- INFINITE CONDUCTIVITY VERTICAL FRACTURE
- UNIFORM FLUX VERTICAL FRACTURE
- HORIZONTAL FRACTURE
- PARTIAL PENETRATION

BASIC RESERVOIR MODEL

- HOMOGENEOUS
- DUAL POROSITY, PSEUDO STEADY STATE INTERPOROSITY FLOW
- DUAL POROSITY, TRANSIENT INTERPOROSITY FLOW
- TRIPLE POROSITY
- DUAL PERMEABILITY
- RADIAL COMPOSITE

OUTER BOUNDARY CONDITION

- INFINITE SYSTEM
- SINGLE SEALING NO FLOW BOUNDARY
- PARTIALLY SEALING BOUNDARY
- SINGLE CONSTANT PRESSURE BOUNDARY
- TWO INTERSECTING NO FLOW BOUNDARIES (WEDGE GEOMETRY)
- PARALLEL NO FLOW BOUNDARIES (CHANNEL)
- GAS CAP/BOTTOM WATER DRIVE
- CLOSED (NO FLOW) CIRCLE
- CONSTANT PRESSURE CIRCLE
- CLOSED (NO FLOW) RECTANGLE
- CONSTANT PRESSURE RECTANGLE
- MIXED BOUNDARY RECTANGLE

FOR SOME APPLICATIONS, SUCH AS HORIZONTAL AND LAYERED RESERVOIR TESTS, ALL OF THE POSSIBLE COMBINATIONS ARE NOT AVAILABLE. REFERENCES ON MOST MODEL COMPONENTS CAN BE FOUND IN SPE PAPERS.

SEQUENCE OF EVENTS

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DATE	TIME (HR:MIN)	DESCRIPTION	ET (MINS)	BHP (PSIA)	WHP (PSIG)
13-SEP		OPEN TO BUBBLE HOSE ONLY			
	07:18	HYDROSTATIC MUD	-4	2809	
	07:20	SET PACKERS	-2		
	07:22	START FLOW	0	84	1"
	07:23		1		8"
	07:24	B.O.B. @ 70 SECONDS	2		1#
	07:27		5		2.8#
	07:32		10		5#
	07:37		15		6.8#
	07:47		25		10.2#
	07:52	END FLOW & START SHUT-IN	30	93	12.8#
	07:54	OPEN TO 1" CHOKE ONLY	32		
	07:58	GAS TO SURFACE	36		
	08:50	OPEN TO 1/4" CHOKE ONLY	88		
	08:55	END SHUT-IN	93	1764	
	08:57	START FLOW	95	67	3#
	08:58		96		11#
	08:59		97		14#
	09:00	MAXIMUM PRESSURE	98		16#
	09:02	41.12 MCFD	100		16#
	09:04	PRESSURE DROPPING	102		15.5#
	09:07		105		14.5#
	09:12		110		13.5#
	09:27		125		10#
	09:57		155		8#
	10:57		215		5.7#
	11:57		275		3.6#
	12:57	END FLOW & START SHUT-IN	335	95	2.9#
14-SEP	06:00	END SHUT-IN	1358	2145	
	06:01	PULL PACKERS LOOSE	1359		
	06:09	HYDROSTATIC MUD	1367	2792	

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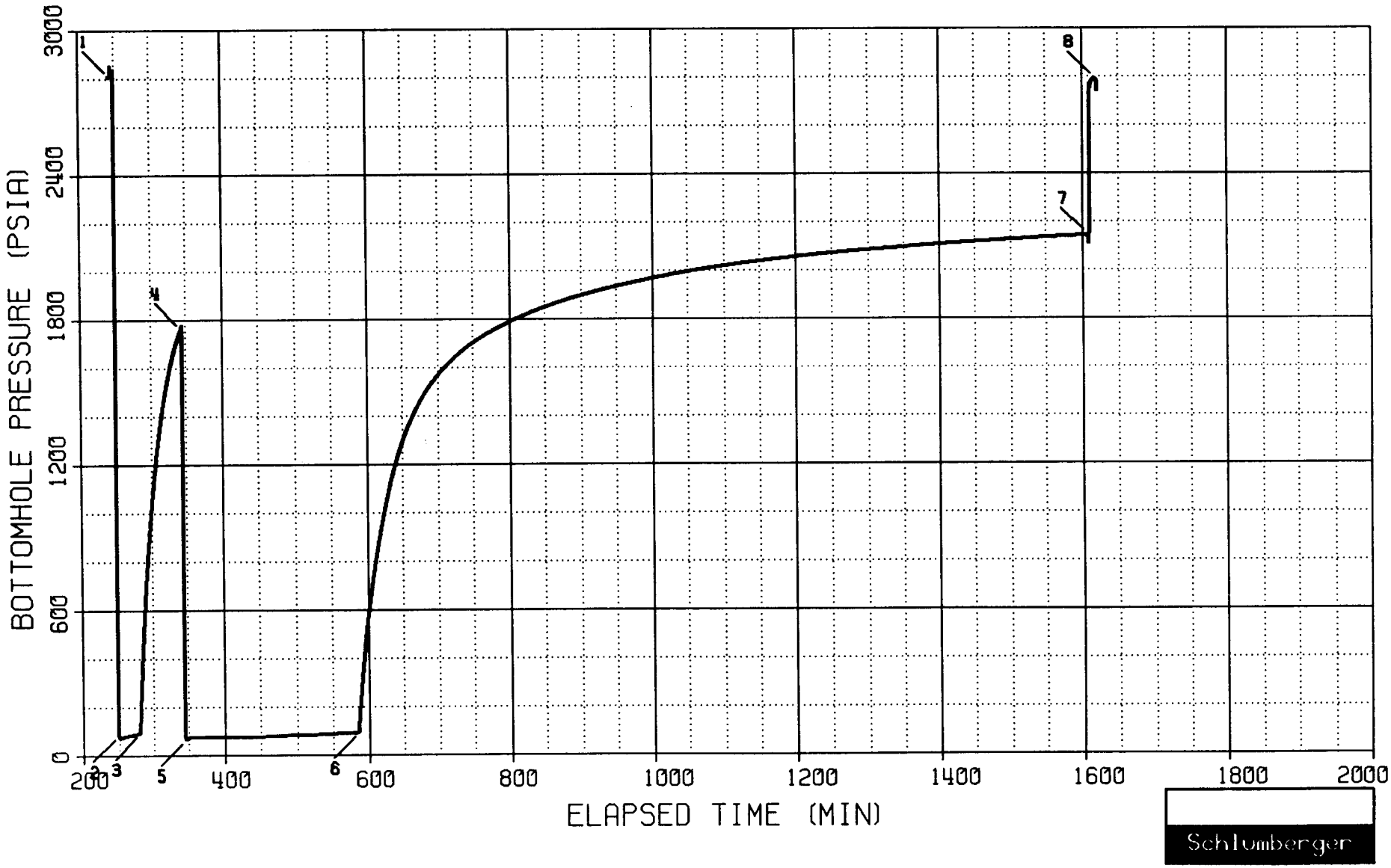
BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-777
DEPTH : 5528 FT
CAPACITY : 10000 PSI
PORT OPENING : INSIDE

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

Electronic Pressure Data

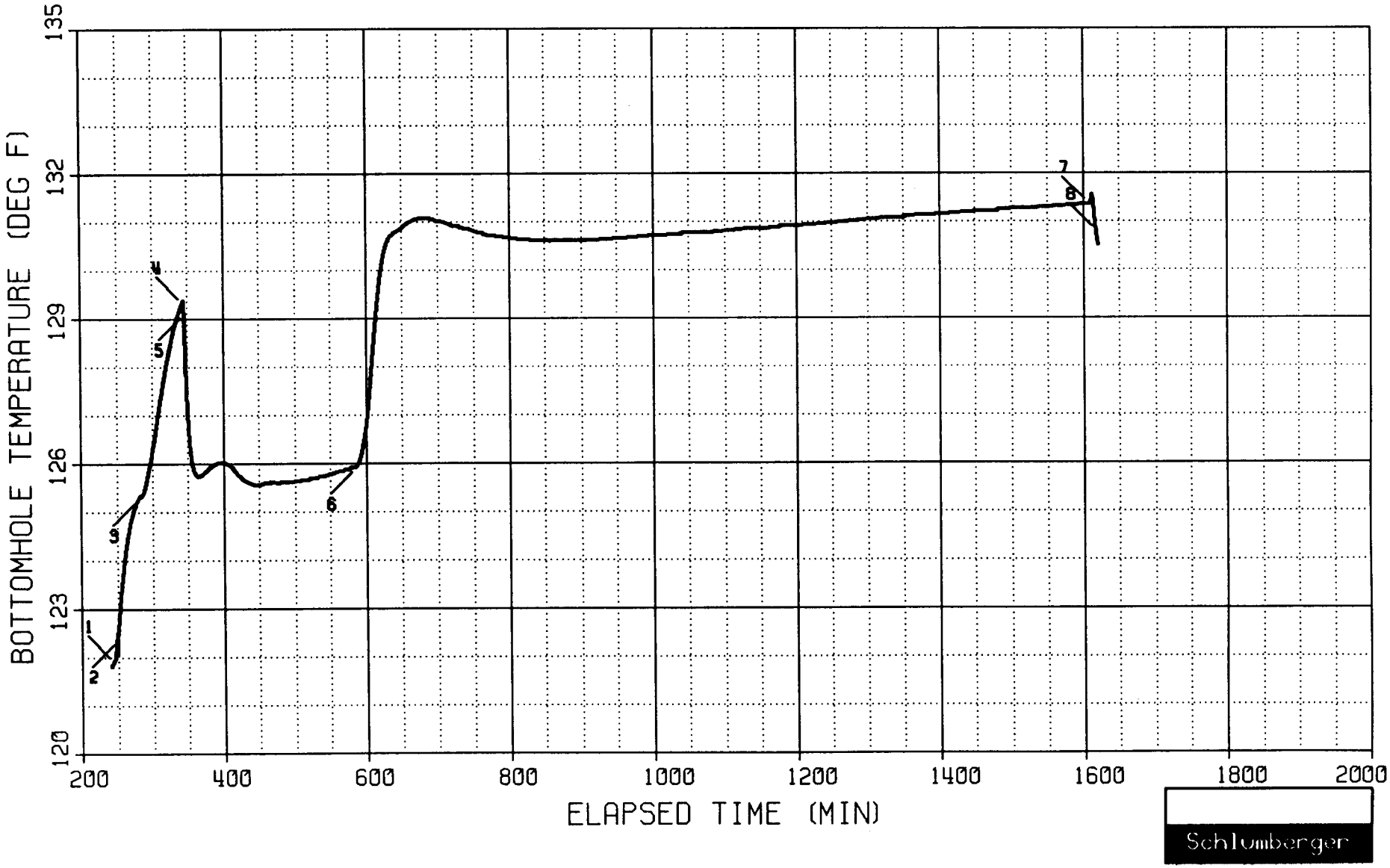


BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-777
DEPTH : 5528 FT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

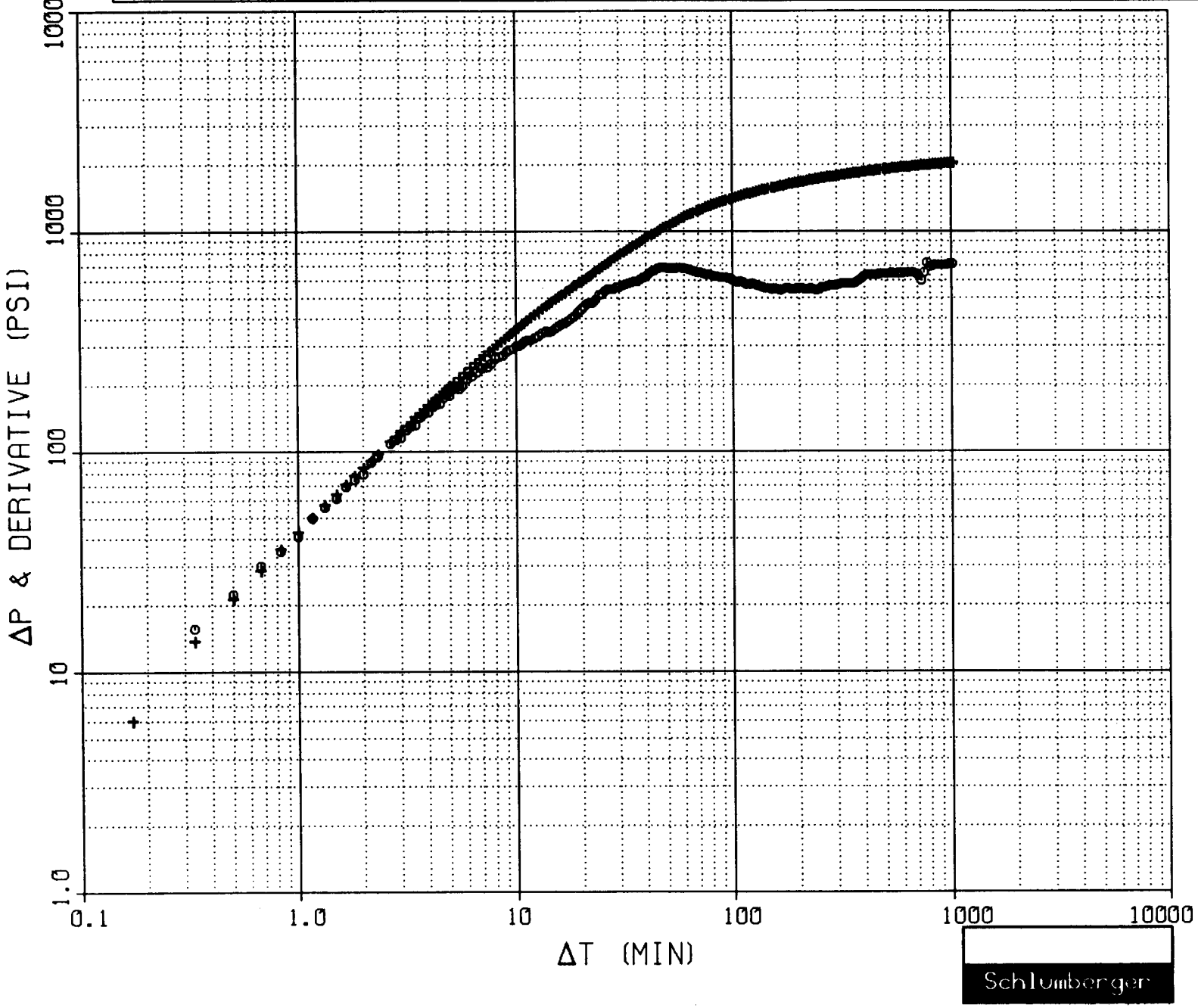
Electronic Temperature Data

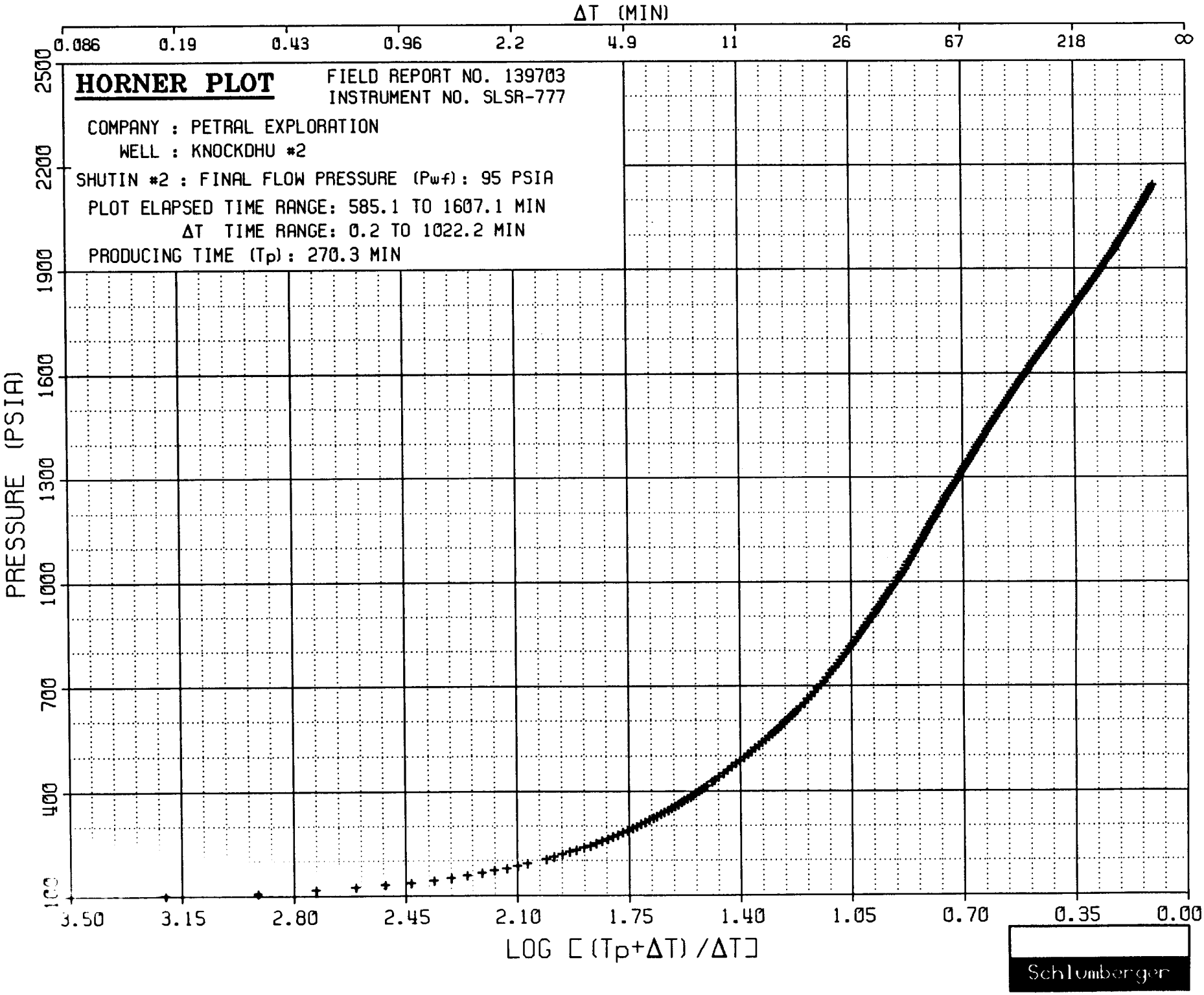


LOG LOG PLOT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-777

SHUTIN #2 : PRODUCING TIME (Tp) : 270.3 MIN
FINAL FLOW PRESSURE (Pwf) : 95 PSIA
PLOT ELAPSED TIME RANGE: 585.1 TO 1607.1 MIN
ΔT TIME RANGE: 0.2 TO 1022.2 MIN




ΔT (MIN)
0.086
0.19
0.43
0.96
2.2
4.9
11
26
67
218
∞
HORNER PLOT
FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-777
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #2 : FINAL FLOW PRESSURE (Pwf): 95 PSIA
PLOT ELAPSED TIME RANGE: 585.1 TO 1607.1 MIN
ΔT TIME RANGE: 0.2 TO 1022.2 MIN
PRODUCING TIME (Tp): 270.3 MIN
PRESSURE (PSIA)
2500
2200
1900
1600
1300
1000
700
400
3.50
3.15
2.80
2.45
2.10
1.75
1.40
1.05
0.70
0.35
0.00
LOG [(Tp+ΔT)/ΔT]
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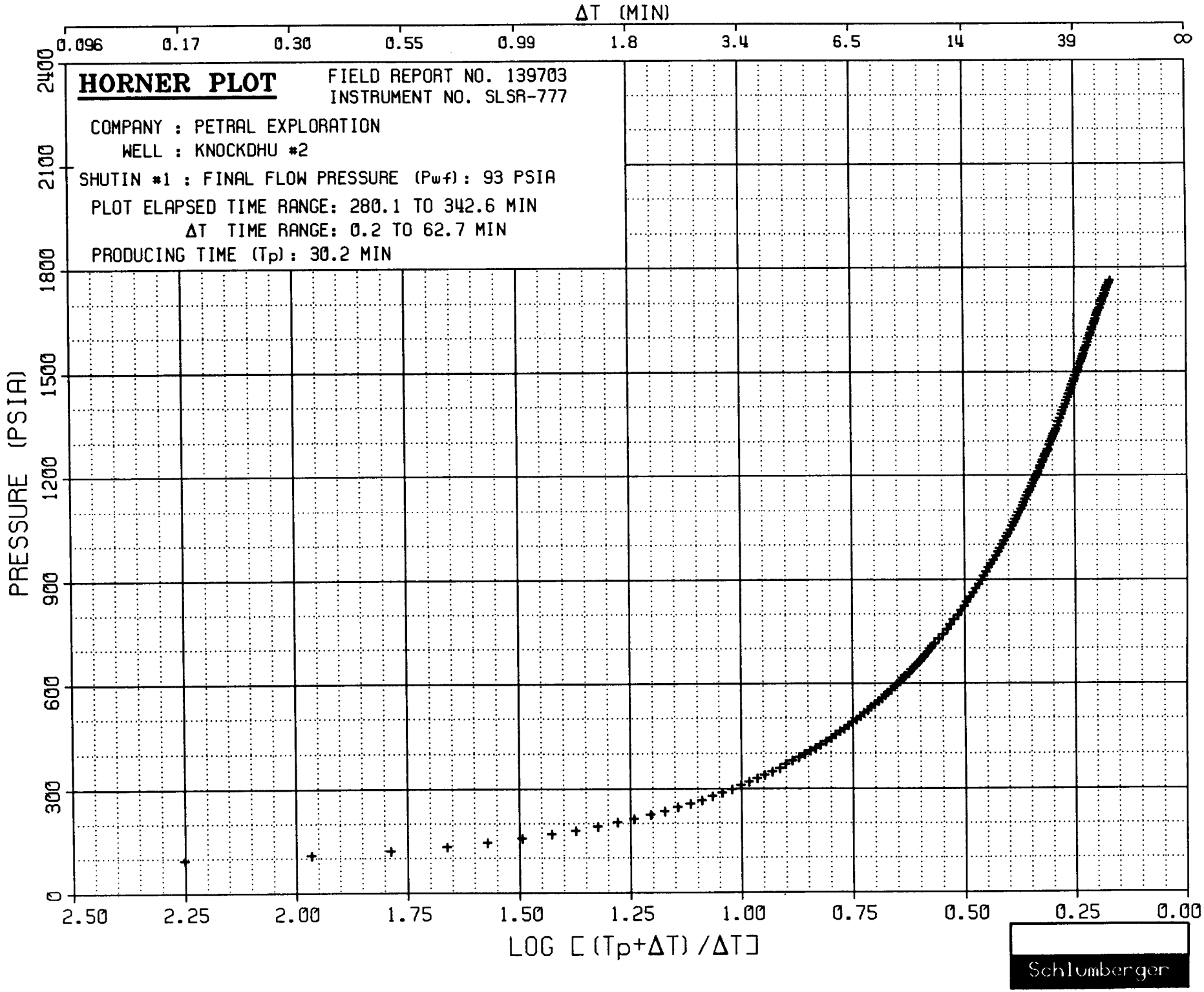

ΔT (MIN)
0.096
0.17
0.30
0.55
0.99
1.8
3.4
6.5
14
39
∞
HORNER PLOT
FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-777
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #1 : FINAL FLOW PRESSURE (Pwf): 93 PSIA
PLOT ELAPSED TIME RANGE: 280.1 TO 342.6 MIN
ΔT TIME RANGE: 0.2 TO 62.7 MIN
PRODUCING TIME (Tp): 30.2 MIN
PRESSURE (PSIA)
2400
2100
1800
1500
1200
900
600
300
0
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
LOG [(Tp+ΔT)/ΔT]
Schlumberger

****
** WELL TEST DATA PRINTOUT **
****

COMPANY: PETRAL EXPLORATION
WELL: KNOCKDHU #2

FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-777

RECORDER CAPACITY: 10000 PSI PORT OPENING: INSIDE DEPTH: 5528 FT

LABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DD-MMM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA	BOT HOLE TEMP. DEG F
1	7:16:32	13-SEP	HYDROSTATIC MUD	243.78	2809.28	121.91
2	7:22:32	13-SEP	START FLOW	249.78	83.73	122.36
3	7:52:42	13-SEP	END FLOW & START SHUT-IN	279.95	92.77	125.28
4	8:55:22	13-SEP	END SHUT-IN	342.62	1763.90	129.34
5	8:57:32	13-SEP	START FLOW	344.78	67.13	129.11
6	12:57:42	13-SEP	END FLOW & START SHUT-IN	584.95	94.54	125.92
7	5:59:52	14-SEP	END SHUT-IN	1607.12	2144.53	131.36
8	6:09:52	14-SEP	HYDROSTATIC MUD	1617.12	2792.15	130.80

SUMMARY OF FLOW PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	INITIAL PRESSURE PSIA
1	249.78	279.95	30.17	83.73	92.77	83.73
2	344.78	584.95	240.17	67.13	94.54	67.13

SUMMARY OF SHUTIN PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	279.95	342.62	62.67	92.77	1763.90	92.77	30.17
2	584.95	1607.12	1022.17	94.54	2144.53	94.54	270.34

TEST PHASE: FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
7:22:32	13-SEP	249.78	0.00	122.36	83.73
7:37:32	13-SEP	264.78	15.00	124.48	83.27
7:52:32	13-SEP	279.78	30.00	125.28	92.71
7:52:42	13-SEP	279.95	30.17	125.28	92.77

TEST PHASE: SHUTIN PERIOD # 1

FINAL FLOW PRESSURE = 92.77 PSIA
PRODUCING TIME = 30.17 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:52:42	13-SEP	279.95	0.00	125.28	92.77	0.00	
7:53:42	13-SEP	280.95	1.00	125.31	155.96	63.19	1.4937
7:54:42	13-SEP	281.95	2.00	125.33	223.35	130.58	1.2064
7:55:42	13-SEP	282.95	3.00	125.31	287.17	194.40	1.0436
7:56:42	13-SEP	283.95	4.00	125.33	347.84	255.07	0.9316
7:57:42	13-SEP	284.95	5.00	125.33	406.09	313.32	0.8472
7:58:42	13-SEP	285.95	6.00	125.37	461.57	368.80	0.7802
7:59:42	13-SEP	286.95	7.00	125.40	514.71	421.94	0.7251
8:00:42	13-SEP	287.95	8.00	125.44	565.42	472.65	0.6786
8:01:42	13-SEP	288.95	9.00	125.49	614.00	521.23	0.6387
8:02:42	13-SEP	289.95	10.00	125.55	660.33	567.56	0.6039
8:04:42	13-SEP	291.95	12.00	125.67	747.65	654.88	0.5458
8:06:42	13-SEP	293.95	14.00	125.83	828.18	735.41	0.4990
8:08:42	13-SEP	295.95	16.00	125.98	902.73	809.96	0.4602
8:10:42	13-SEP	297.95	18.00	126.12	971.94	879.17	0.4275
8:12:42	13-SEP	299.95	20.00	126.28	1036.43	943.66	0.3994
8:14:42	13-SEP	301.95	22.00	126.46	1096.79	1004.02	0.3750
8:16:42	13-SEP	303.95	24.00	126.63	1153.21	1060.44	0.3535
8:18:42	13-SEP	305.95	26.00	126.82	1206.23	1113.46	0.3345
8:20:42	13-SEP	307.95	28.00	127.00	1256.06	1163.29	0.3175
8:22:42	13-SEP	309.95	30.00	127.20	1302.81	1210.04	0.3023
8:27:42	13-SEP	314.95	35.00	127.65	1408.11	1315.34	0.2700
8:32:42	13-SEP	319.95	40.00	128.08	1498.00	1405.23	0.2441
8:37:42	13-SEP	324.95	45.00	128.44	1574.64	1481.87	0.2228
8:42:42	13-SEP	329.95	50.00	128.75	1639.80	1547.03	0.2050
8:47:42	13-SEP	334.95	55.00	129.02	1695.03	1602.26	0.1899
8:52:42	13-SEP	339.95	60.00	129.24	1741.99	1649.22	0.1769
8:55:22	13-SEP	342.62	62.67	129.34	1763.90	1671.13	0.1707

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
8:57:32	13-SEP	344.78	0.00	129.11	67.13
9:12:32	13-SEP	359.78	15.00	125.80	77.37
9:27:32	13-SEP	374.78	30.00	125.83	75.92
9:42:32	13-SEP	389.78	45.00	126.00	75.70

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
9:57:32	13-SEP	404.78	60.00	126.00	75.31
10:12:32	13-SEP	419.78	75.00	125.78	75.62
10:27:32	13-SEP	434.78	90.00	125.60	76.00
10:42:32	13-SEP	449.78	105.00	125.56	77.51
10:57:32	13-SEP	464.78	120.00	125.62	79.19
11:12:32	13-SEP	479.78	135.00	125.62	81.33
11:27:32	13-SEP	494.78	150.00	125.62	82.72
11:42:32	13-SEP	509.78	165.00	125.65	83.58
11:57:32	13-SEP	524.78	180.00	125.69	85.42
12:12:32	13-SEP	539.78	195.00	125.74	87.48
12:27:32	13-SEP	554.78	210.00	125.80	89.62
12:42:32	13-SEP	569.78	225.00	125.87	92.41
12:57:32	13-SEP	584.78	240.00	125.92	94.09
12:57:42	13-SEP	584.95	240.17	125.92	94.54

TEST PHASE: SHUTIN PERIOD # 2

FINAL FLOW PRESSURE = 94.54 PSIA
PRODUCING TIME = 270.34 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
12:57:42	13-SEP	584.95	0.00	125.92	94.54	0.00	
12:58:42	13-SEP	585.95	1.00	125.94	137.22	42.68	2.4335
12:59:42	13-SEP	586.95	2.00	125.96	178.17	83.63	2.1341
13:00:42	13-SEP	587.95	3.00	125.98	217.66	123.12	1.9596
13:01:42	13-SEP	588.95	4.00	126.01	255.78	161.24	1.8362
13:02:42	13-SEP	589.95	5.00	126.05	292.40	197.86	1.7409
13:03:42	13-SEP	590.95	6.00	126.10	327.50	232.96	1.6633
13:04:42	13-SEP	591.95	7.00	126.16	361.21	266.67	1.5979
13:05:42	13-SEP	592.95	8.00	126.21	393.15	298.61	1.5415
13:06:42	13-SEP	593.95	9.00	126.28	424.17	329.63	1.4919
13:07:42	13-SEP	594.95	10.00	126.36	453.84	359.30	1.4477
13:09:42	13-SEP	596.95	12.00	126.54	508.78	414.24	1.3716
13:11:42	13-SEP	598.95	14.00	126.72	558.83	464.29	1.3077
13:13:42	13-SEP	600.95	16.00	126.97	603.98	509.44	1.2528
13:15:42	13-SEP	602.95	18.00	127.26	646.87	552.33	1.2046
13:17:42	13-SEP	604.95	20.00	127.60	688.45	593.91	1.1619
13:19:42	13-SEP	606.95	22.00	127.94	729.34	634.80	1.1235
13:21:42	13-SEP	608.95	24.00	128.28	768.40	673.86	1.0886
13:23:42	13-SEP	610.95	26.00	128.62	806.65	712.11	1.0568
13:25:42	13-SEP	612.95	28.00	128.97	843.36	748.82	1.0276
13:27:42	13-SEP	614.95	30.00	129.29	877.95	783.41	1.0005
13:32:42	13-SEP	619.95	35.00	129.94	957.18	862.64	0.9407
13:37:42	13-SEP	624.95	40.00	130.37	1028.40	933.86	0.8898
13:42:42	13-SEP	629.95	45.00	130.60	1094.85	1000.31	0.8456
13:47:42	13-SEP	634.95	50.00	130.73	1155.94	1061.40	0.8066
13:52:42	13-SEP	639.95	55.00	130.78	1210.23	1115.69	0.7720
13:57:42	13-SEP	644.95	60.00	130.84	1259.09	1164.55	0.7408
14:02:42	13-SEP	649.95	65.00	130.89	1302.89	1208.35	0.7126
14:07:42	13-SEP	654.95	70.00	130.95	1341.73	1247.19	0.6868

TEST PHASE: SHUTIN PERIOD # 2 FINAL FLOW PRESSURE = 94.54 PSIA
PRODUCING TIME = 270.34 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
14:12:42	13-SEP	659.95	75.00	131.00	1376.88	1282.34	0.6632
14:17:42	13-SEP	664.95	80.00	131.04	1408.51	1313.97	0.6414
14:22:42	13-SEP	669.95	85.00	131.05	1437.70	1343.16	0.6212
14:27:42	13-SEP	674.95	90.00	131.07	1464.37	1369.83	0.6025
14:32:42	13-SEP	679.95	95.00	131.07	1489.22	1394.68	0.5850
14:37:42	13-SEP	684.95	100.00	131.07	1512.17	1417.63	0.5686
14:42:42	13-SEP	689.95	105.00	131.05	1533.03	1438.49	0.5532
14:47:42	13-SEP	694.95	110.00	131.04	1552.64	1458.10	0.5388
14:52:42	13-SEP	699.95	115.00	131.02	1571.04	1476.50	0.5251
14:57:42	13-SEP	704.95	120.00	131.02	1587.89	1493.35	0.5123
15:02:42	13-SEP	709.95	125.00	131.00	1604.13	1509.59	0.5001
15:07:42	13-SEP	714.95	130.00	130.96	1619.43	1524.89	0.4885
15:12:42	13-SEP	719.95	135.00	130.95	1633.70	1539.16	0.4775
15:17:42	13-SEP	724.95	140.00	130.93	1647.10	1552.56	0.4670
15:22:42	13-SEP	729.95	145.00	130.91	1659.77	1565.23	0.4570
15:27:42	13-SEP	734.95	150.00	130.89	1671.87	1577.33	0.4475
15:32:42	13-SEP	739.95	155.00	130.87	1683.32	1588.78	0.4384
15:37:42	13-SEP	744.95	160.00	130.84	1694.36	1599.82	0.4297
15:42:42	13-SEP	749.95	165.00	130.82	1704.66	1610.12	0.4213
15:47:42	13-SEP	754.95	170.00	130.80	1714.75	1620.21	0.4133
15:52:42	13-SEP	759.95	175.00	130.77	1724.38	1629.84	0.4057
15:57:42	13-SEP	764.95	180.00	130.75	1733.80	1639.26	0.3983
16:12:42	13-SEP	779.95	195.00	130.71	1759.53	1664.99	0.3777
16:27:42	13-SEP	794.95	210.00	130.68	1782.98	1688.44	0.3593
16:42:42	13-SEP	809.95	225.00	130.66	1803.88	1709.34	0.3427
16:57:42	13-SEP	824.95	240.00	130.64	1822.69	1728.15	0.3276
17:12:42	13-SEP	839.95	255.00	130.62	1840.00	1745.46	0.3139
17:27:42	13-SEP	854.95	270.00	130.62	1856.18	1761.64	0.3013
17:42:42	13-SEP	869.95	285.00	130.62	1871.25	1776.71	0.2897
17:57:42	13-SEP	884.95	300.00	130.62	1885.33	1790.79	0.2790
18:12:42	13-SEP	899.95	315.00	130.62	1898.44	1803.90	0.2691
18:27:42	13-SEP	914.95	330.00	130.62	1910.76	1816.22	0.2599
18:42:42	13-SEP	929.95	345.00	130.64	1922.25	1827.71	0.2513
18:57:42	13-SEP	944.95	360.00	130.66	1932.93	1838.39	0.2433
19:12:42	13-SEP	959.95	375.00	130.66	1943.23	1848.69	0.2358
19:27:42	13-SEP	974.95	390.00	130.68	1953.16	1858.62	0.2287
19:42:42	13-SEP	989.95	405.00	130.69	1962.73	1868.19	0.2221
19:57:42	13-SEP	1004.95	420.00	130.73	1971.86	1877.32	0.2158
20:12:42	13-SEP	1019.95	435.00	130.75	1980.57	1886.03	0.2099
20:27:42	13-SEP	1034.95	450.00	130.75	1988.71	1894.17	0.2043
20:42:42	13-SEP	1049.95	465.00	130.77	1996.46	1901.92	0.1990
20:57:42	13-SEP	1064.95	480.00	130.77	2003.90	1909.36	0.1940
21:12:42	13-SEP	1079.95	495.00	130.78	2010.94	1916.40	0.1892
21:27:42	13-SEP	1094.95	510.00	130.80	2017.59	1923.05	0.1847
21:42:42	13-SEP	1109.95	525.00	130.82	2024.09	1929.55	0.1804
21:57:42	13-SEP	1124.95	540.00	130.86	2030.20	1935.66	0.1763
22:12:42	13-SEP	1139.95	555.00	130.86	2035.99	1941.45	0.1723
22:27:42	13-SEP	1154.95	570.00	130.87	2041.64	1947.10	0.1686
22:42:42	13-SEP	1169.95	585.00	130.89	2047.02	1952.48	0.1650
22:57:42	13-SEP	1184.95	600.00	130.91	2052.13	1957.59	0.1615

TEST PHASE: SHUTIN PERIOD # 2

FINAL FLOW PRESSURE = 94.54 PSIA
PRODUCING TIME = 270.34 MIN

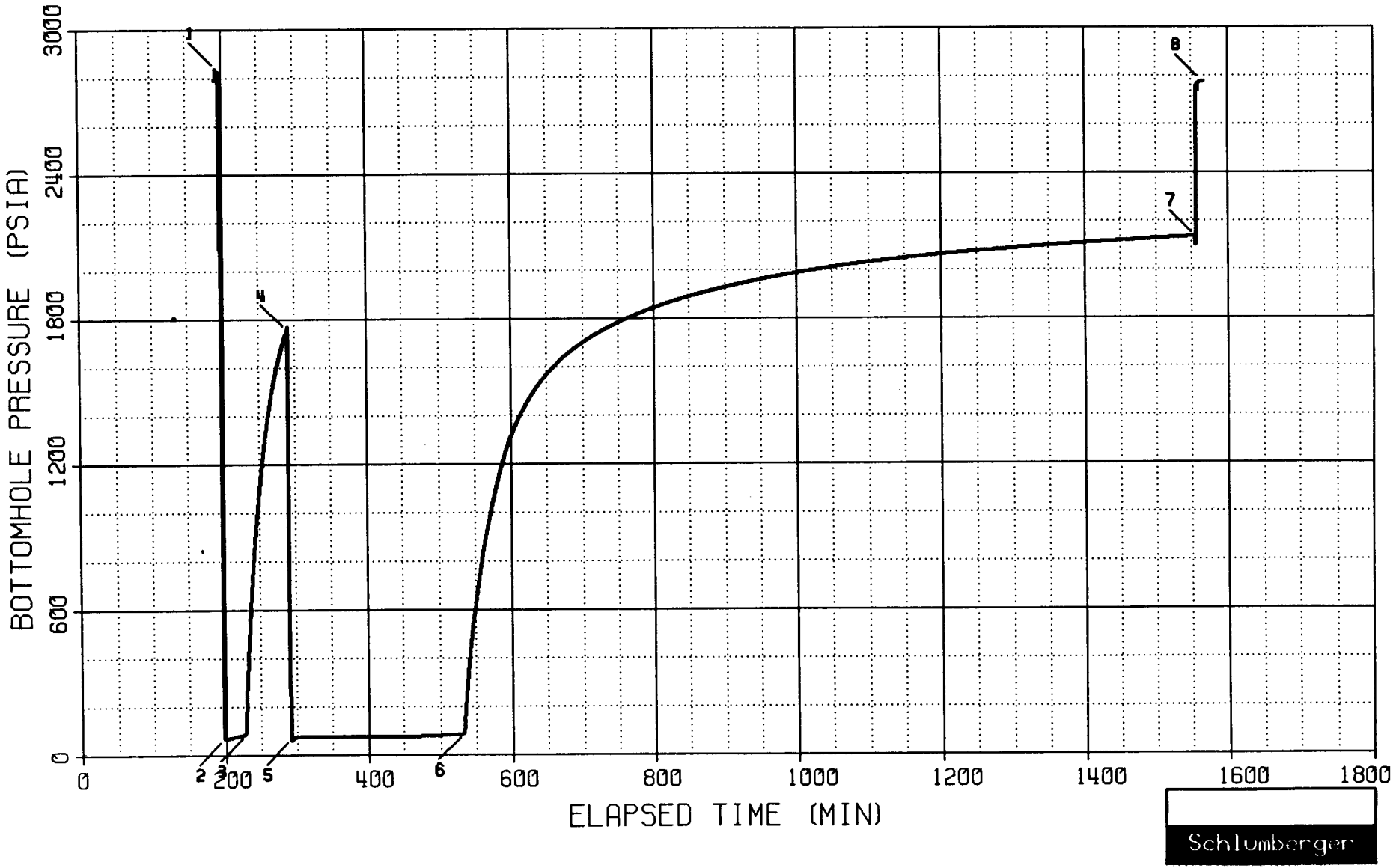
TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
23:12:42	13-SEP	1199.95	615.00	130.93	2056.99	1962.45	0.1582
23:27:42	13-SEP	1214.95	630.00	130.95	2061.75	1967.21	0.1551
23:42:42	13-SEP	1229.95	645.00	130.96	2066.33	1971.79	0.1520
23:57:42	13-SEP	1244.95	660.00	130.98	2070.69	1976.15	0.1491
0:12:42	14-SEP	1259.95	675.00	131.00	2074.91	1980.37	0.1463
0:27:42	14-SEP	1274.95	690.00	131.02	2078.89	1984.35	0.1436
0:42:42	14-SEP	1289.95	705.00	131.04	2082.79	1988.25	0.1410
0:57:42	14-SEP	1304.95	720.00	131.05	2086.47	1991.93	0.1385
1:12:42	14-SEP	1319.95	735.00	131.07	2089.68	1995.14	0.1360
1:27:42	14-SEP	1334.95	750.00	131.09	2092.84	1998.30	0.1337
1:42:42	14-SEP	1349.95	765.00	131.09	2096.65	2002.11	0.1314
1:57:42	14-SEP	1364.95	780.00	131.13	2100.22	2005.68	0.1292
2:12:42	14-SEP	1379.95	795.00	131.14	2103.67	2009.13	0.1271
2:27:42	14-SEP	1394.95	810.00	131.16	2106.72	2012.18	0.1251
2:42:42	14-SEP	1409.95	825.00	131.16	2110.01	2015.47	0.1231
2:57:42	14-SEP	1424.95	840.00	131.18	2113.14	2018.60	0.1212
3:12:42	14-SEP	1439.95	855.00	131.20	2116.15	2021.61	0.1193
3:27:42	14-SEP	1454.95	870.00	131.22	2119.07	2024.53	0.1175
3:42:42	14-SEP	1469.95	885.00	131.23	2121.91	2027.37	0.1158
3:57:42	14-SEP	1484.95	900.00	131.25	2124.65	2030.11	0.1141
4:12:42	14-SEP	1499.95	915.00	131.27	2127.34	2032.80	0.1124
4:27:42	14-SEP	1514.95	930.00	131.29	2129.89	2035.35	0.1108
4:42:42	14-SEP	1529.95	945.00	131.29	2132.44	2037.90	0.1093
4:57:42	14-SEP	1544.95	960.00	131.31	2134.92	2040.38	0.1078
5:12:42	14-SEP	1559.95	975.00	131.32	2137.31	2042.77	0.1063
5:27:42	14-SEP	1574.95	990.00	131.34	2139.64	2045.10	0.1049
5:42:42	14-SEP	1589.95	1005.00	131.34	2141.94	2047.40	0.1035
5:57:42	14-SEP	1604.95	1020.00	131.36	2144.18	2049.64	0.1021
5:59:52	14-SEP	1607.12	1022.17	131.36	2144.53	2049.99	0.1019

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-884
DEPTH : 5497 FT
CAPACITY : 10000 PSI
PORT OPENING : INSIDE

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

Electronic Pressure Data

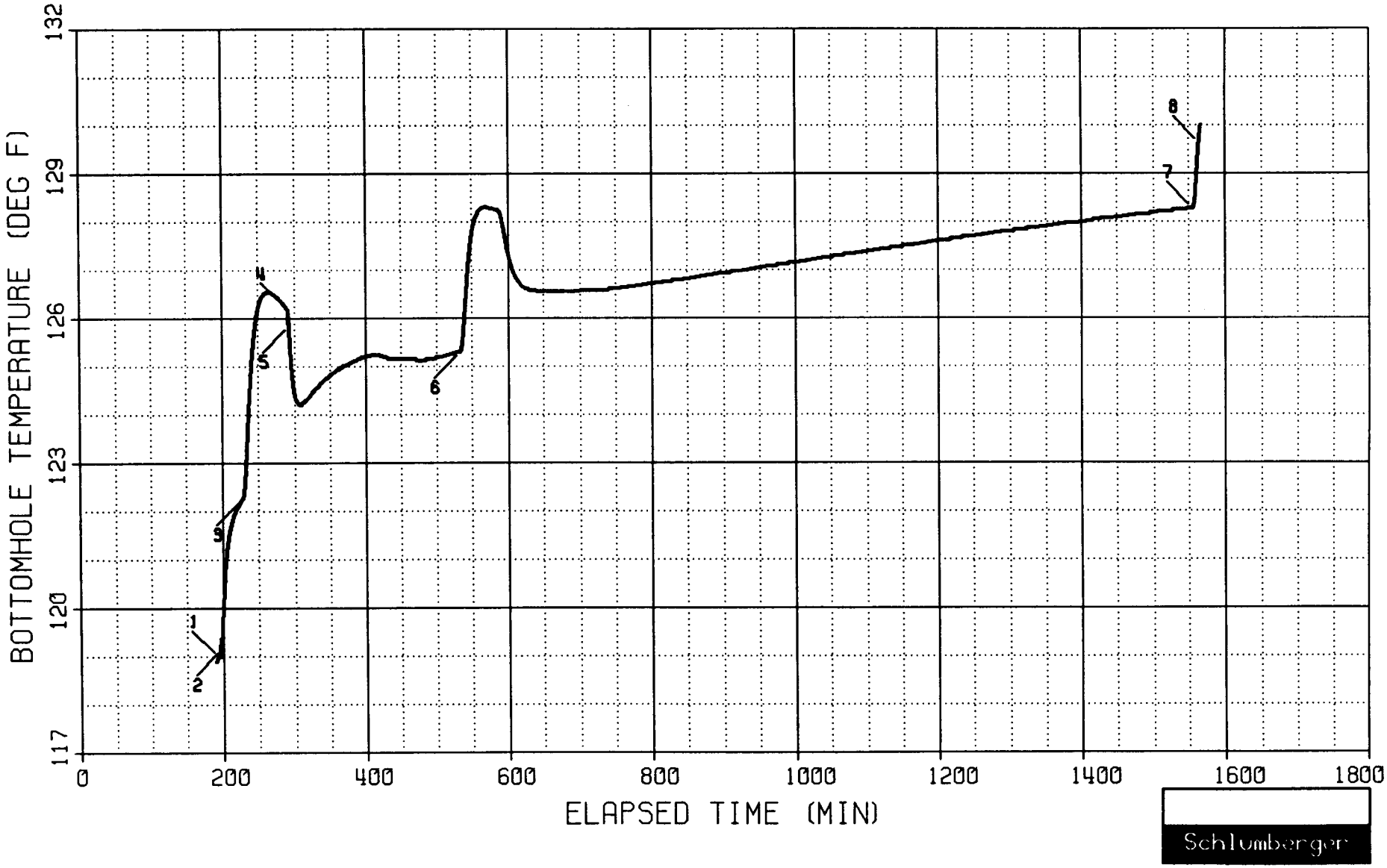


BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-884
DEPTH : 5497 FT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

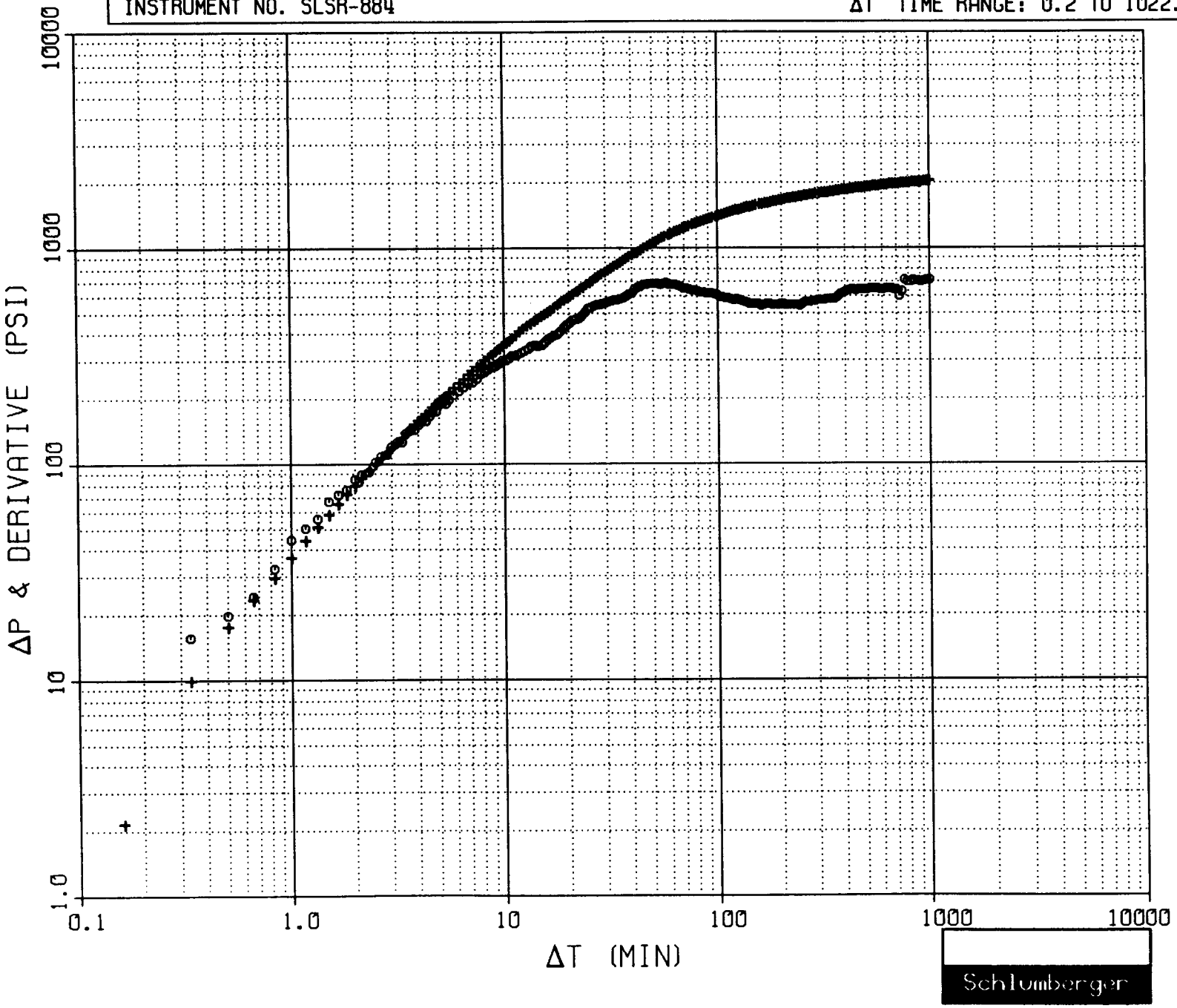
Electronic Temperature Data

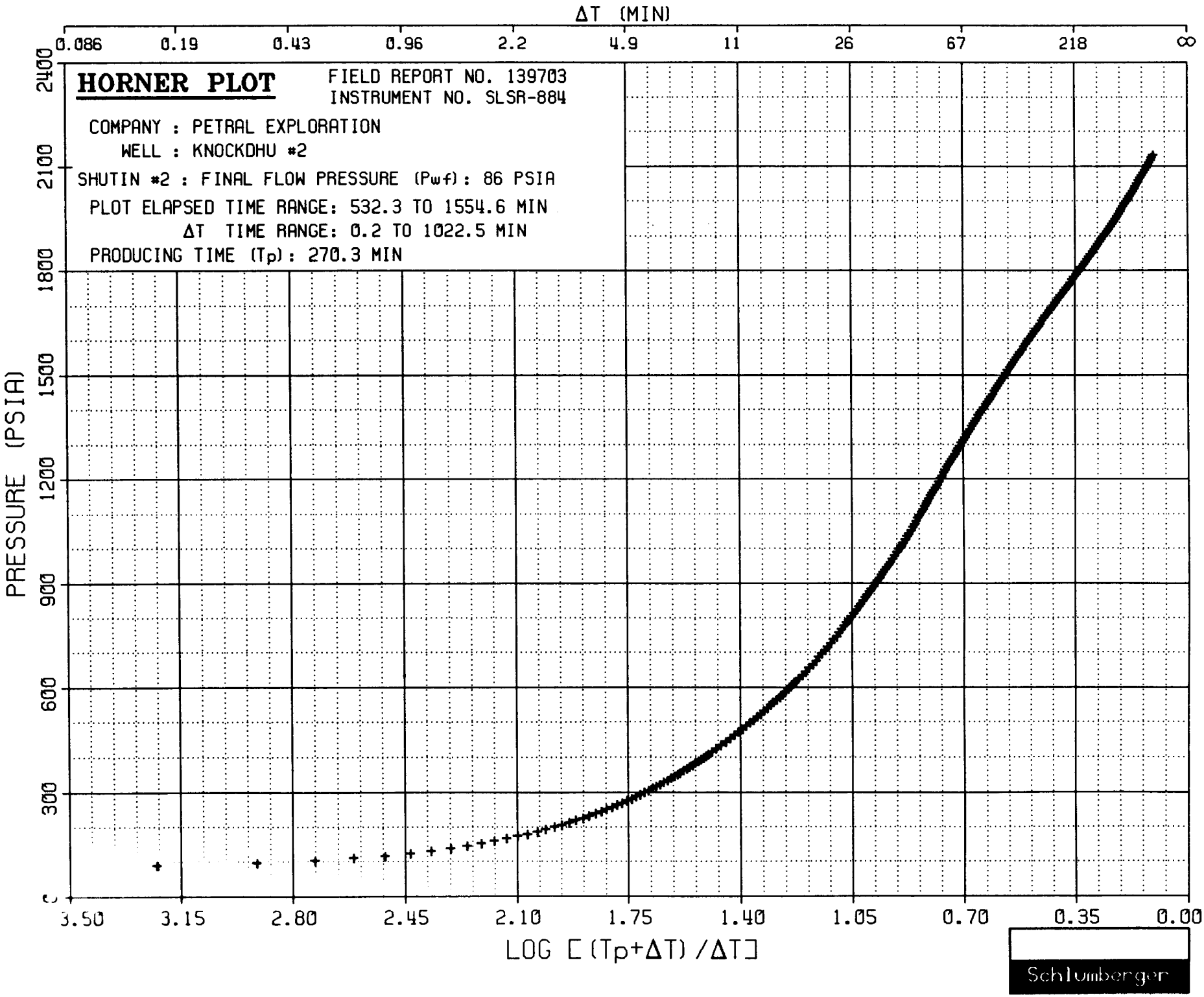


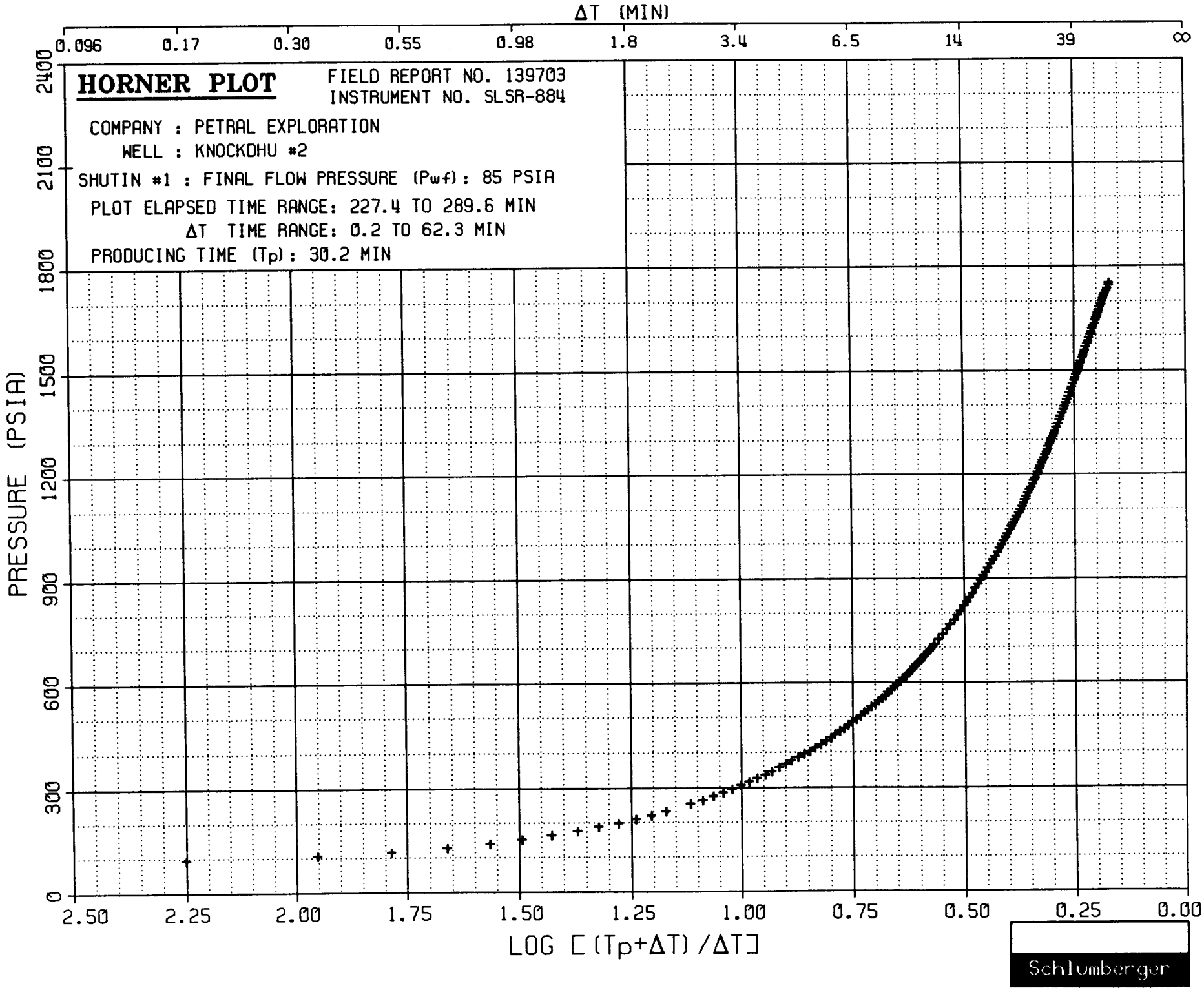
LOG LOG PLOT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-884

SHUTIN #2 : PRODUCING TIME (Tp) : 270.3 MIN
FINAL FLOW PRESSURE (Pwf) : 86 PSIA
PLOT ELAPSED TIME RANGE: 532.3 TO 1554.6 MIN
ΔT TIME RANGE: 0.2 TO 1022.5 MIN




ΔT (MIN)
0.086
0.19
0.43
0.96
2.2
4.9
11
26
67
218
∞
HORNER PLOT
FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-884
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #2 : FINAL FLOW PRESSURE (Pwf): 86 PSIA
PLOT ELAPSED TIME RANGE: 532.3 TO 1554.6 MIN
ΔT TIME RANGE: 0.2 TO 1022.5 MIN
PRODUCING TIME (Tp): 270.3 MIN
PRESSURE (PSIA)
2400
2100
1800
1500
1200
900
600
300
3.50
3.15
2.80
2.45
2.10
1.75
1.40
1.05
0.70
0.35
0.00
LOG [(Tp+ΔT)/ΔT]
Schlumberger


ΔT (MIN)
0.096
0.17
0.30
0.55
0.98
1.8
3.4
6.5
14
39
∞
HORNER PLOT
FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-884
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #1 : FINAL FLOW PRESSURE (Pwf): 85 PSIA
PLOT ELAPSED TIME RANGE: 227.4 TO 289.6 MIN
ΔT TIME RANGE: 0.2 TO 62.3 MIN
PRODUCING TIME (Tp): 30.2 MIN
PRESSURE (PSIA)
2400
2100
1800
1500
1200
900
600
300
0
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
LOG [(Tp+ΔT)/ΔT]
Schlumberger

****
** WELL TEST DATA PRINTOUT **
****

COMPANY: PETRAL EXPLORATION
WELL: KNOCKDHU #2

FIELD REPORT NO. 139703
INSTRUMENT NO. SLSR-884

RECORDER CAPACITY: 10000 PSI PORT OPENING: INSIDE DEPTH: 5497 FT

LABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DD-MMM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA	BOT HOLE TEMP. DEG F
1	7:17:47	13-SEP	HYDROSTATIC MUD	192.28	2839.11	118.99
2	7:22:37	13-SEP	START FLOW	197.12	68.40	119.17
3	7:52:47	13-SEP	END FLOW & START SHUT-IN	227.28	85.15	122.27
4	8:55:07	13-SEP	END SHUT-IN	289.62	1752.44	126.19
5	8:57:27	13-SEP	START FLOW	291.95	68.14	125.85
6	12:57:37	13-SEP	END FLOW & START SHUT-IN	532.12	86.38	125.31
7	6:00:07	14-SEP	END SHUT-IN	1554.62	2133.81	128.28
8	6:08:57	14-SEP	HYDROSTATIC MUD	1563.45	2777.11	129.63

SUMMARY OF FLOW PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	INITIAL PRESSURE PSIA
1	197.12	227.28	30.16	68.40	85.15	68.40
2	291.95	532.12	240.17	68.14	86.38	68.14

SUMMARY OF SHUTIN PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	227.28	289.62	62.34	85.15	1752.44	85.15	30.16
2	532.12	1554.62	1022.50	86.38	2133.81	86.38	270.33

TEST PHASE: FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
7:22:37	13-SEP	197.12	0.00	119.17	68.40
7:37:37	13-SEP	212.12	15.00	121.75	75.62
7:52:37	13-SEP	227.12	30.00	122.27	85.07
7:52:47	13-SEP	227.28	30.16	122.27	85.15

TEST PHASE: SHUTIN PERIOD # 1

FINAL FLOW PRESSURE = 85.15 PSIA
PRODUCING TIME = 30.16 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:52:47	13-SEP	227.28	0.00	122.27	85.15	0.00	
7:53:47	13-SEP	228.28	1.00	122.31	152.44	67.29	1.4936
7:54:47	13-SEP	229.28	2.00	122.36	220.01	134.86	1.2063
7:55:47	13-SEP	230.28	3.00	122.50	284.52	199.37	1.0435
7:56:47	13-SEP	231.28	4.00	122.70	345.44	260.29	0.9315
7:57:47	13-SEP	232.28	5.00	122.95	403.61	318.46	0.8471
7:58:47	13-SEP	233.28	6.00	123.24	459.17	374.02	0.7801
7:59:47	13-SEP	234.28	7.00	123.53	512.15	427.00	0.7250
8:00:47	13-SEP	235.28	8.00	123.82	562.60	477.45	0.6785
8:01:47	13-SEP	236.28	9.00	124.11	611.19	526.04	0.6386
8:02:47	13-SEP	237.28	10.00	124.36	657.51	572.36	0.6038
8:04:47	13-SEP	239.28	12.00	124.84	744.67	659.52	0.5457
8:06:47	13-SEP	241.28	14.00	125.24	824.95	739.80	0.4989
8:08:47	13-SEP	243.28	16.00	125.58	899.22	814.07	0.4601
8:10:47	13-SEP	245.28	18.00	125.83	968.14	882.99	0.4274
8:12:47	13-SEP	247.28	20.00	126.05	1032.17	947.02	0.3993
8:14:47	13-SEP	249.28	22.00	126.19	1092.32	1007.17	0.3749
8:16:47	13-SEP	251.28	24.00	126.32	1148.63	1063.48	0.3535
8:18:47	13-SEP	253.28	26.00	126.39	1201.38	1116.23	0.3345
8:20:47	13-SEP	255.28	28.00	126.46	1251.06	1165.91	0.3175
8:22:47	13-SEP	257.28	30.00	126.50	1297.57	1212.42	0.3022
8:27:47	13-SEP	262.28	35.00	126.54	1402.40	1317.25	0.2699
8:32:47	13-SEP	267.28	40.00	126.54	1491.88	1406.73	0.2440
8:37:47	13-SEP	272.28	45.00	126.48	1568.11	1482.96	0.2228
8:42:47	13-SEP	277.28	50.00	126.41	1632.73	1547.58	0.2050
8:47:47	13-SEP	282.28	55.00	126.34	1687.81	1602.66	0.1899
8:52:47	13-SEP	287.28	60.00	126.25	1734.45	1649.30	0.1769
8:55:07	13-SEP	289.62	62.34	126.19	1752.44	1667.29	0.1714

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
8:57:27	13-SEP	291.95	0.00	125.85	68.14
9:12:27	13-SEP	306.95	15.00	124.21	77.17
9:27:27	13-SEP	321.95	30.00	124.41	75.74
9:42:27	13-SEP	336.95	45.00	124.66	75.51

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
9:57:27	13-SEP	351.95	60.00	124.84	75.17
10:12:27	13-SEP	366.95	75.00	124.99	74.95
10:27:27	13-SEP	381.95	90.00	125.10	74.46
10:42:27	13-SEP	396.95	105.00	125.20	74.56
10:57:27	13-SEP	411.95	120.00	125.24	74.52
11:12:27	13-SEP	426.95	135.00	125.19	74.67
11:27:27	13-SEP	441.95	150.00	125.15	75.50
11:42:27	13-SEP	456.95	165.00	125.17	76.23
11:57:27	13-SEP	471.95	180.00	125.13	78.19
12:12:27	13-SEP	486.95	195.00	125.15	79.91
12:27:27	13-SEP	501.95	210.00	125.19	82.05
12:42:27	13-SEP	516.95	225.00	125.24	84.10
12:57:27	13-SEP	531.95	240.00	125.31	86.20
12:57:37	13-SEP	532.12	240.17	125.31	86.38

TEST PHASE: SHUTIN PERIOD # 2

FINAL FLOW PRESSURE = 86.38 PSIA
PRODUCING TIME = 270.33 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
12:57:37	13-SEP	532.12	0.00	125.31	86.38	0.00	
12:58:37	13-SEP	533.12	1.00	125.31	122.86	36.48	2.4335
12:59:37	13-SEP	534.12	2.00	125.35	165.59	79.21	2.1341
13:00:37	13-SEP	535.12	3.00	125.40	205.52	119.14	1.9596
13:01:37	13-SEP	536.12	4.00	125.53	243.79	157.41	1.8362
13:02:37	13-SEP	537.12	5.00	125.69	280.35	193.97	1.7409
13:03:37	13-SEP	538.12	6.00	125.87	315.79	229.41	1.6633
13:04:37	13-SEP	539.12	7.00	126.07	349.86	263.48	1.5979
13:05:37	13-SEP	540.12	8.00	126.27	382.14	295.76	1.5415
13:06:37	13-SEP	541.12	9.00	126.46	413.46	327.08	1.4919
13:07:37	13-SEP	542.12	10.00	126.66	443.20	356.82	1.4477
13:09:37	13-SEP	544.12	12.00	127.06	498.52	412.14	1.3716
13:11:37	13-SEP	546.12	14.00	127.38	548.78	462.40	1.3077
13:13:37	13-SEP	548.12	16.00	127.63	594.12	507.74	1.2527
13:15:37	13-SEP	550.12	18.00	127.83	637.18	550.80	1.2046
13:17:37	13-SEP	552.12	20.00	127.98	678.96	592.58	1.1619
13:19:37	13-SEP	554.12	22.00	128.08	719.85	633.47	1.1235
13:21:37	13-SEP	556.12	24.00	128.16	758.86	672.48	1.0886
13:23:37	13-SEP	558.12	26.00	128.21	797.05	710.67	1.0568
13:25:37	13-SEP	560.12	28.00	128.25	833.81	747.43	1.0275
13:27:37	13-SEP	562.12	30.00	128.28	868.16	781.78	1.0005
13:32:37	13-SEP	567.12	35.00	128.32	946.83	860.45	0.9407
13:37:37	13-SEP	572.12	40.00	128.30	1017.36	930.98	0.8898
13:42:37	13-SEP	577.12	45.00	128.28	1083.85	997.47	0.8456
13:47:37	13-SEP	582.12	50.00	128.26	1145.03	1058.65	0.8066
13:52:37	13-SEP	587.12	55.00	128.21	1199.47	1113.09	0.7720
13:57:37	13-SEP	592.12	60.00	127.92	1248.50	1162.12	0.7408
14:02:37	13-SEP	597.12	65.00	127.53	1292.44	1206.06	0.7126
14:07:37	13-SEP	602.12	70.00	127.20	1331.57	1245.19	0.6868

TEST PHASE: SHUTIN PERIOD # 2 FINAL FLOW PRESSURE = 86.38 PSIA
PRODUCING TIME = 270.33 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
14:12:37	13-SEP	607.12	75.00	126.97	1366.80	1280.42	0.6632
14:17:37	13-SEP	612.12	80.00	126.81	1398.67	1312.29	0.6414
14:22:37	13-SEP	617.12	85.00	126.70	1427.77	1341.39	0.6212
14:27:37	13-SEP	622.12	90.00	126.64	1454.49	1368.11	0.6025
14:32:37	13-SEP	627.12	95.00	126.61	1479.38	1393.00	0.5850
14:37:37	13-SEP	632.12	100.00	126.57	1502.37	1415.99	0.5686
14:42:37	13-SEP	637.12	105.00	126.57	1523.27	1436.89	0.5532
14:47:37	13-SEP	642.12	110.00	126.55	1542.86	1456.48	0.5388
14:52:37	13-SEP	647.12	115.00	126.55	1561.32	1474.94	0.5251
14:57:37	13-SEP	652.12	120.00	126.55	1578.26	1491.88	0.5123
15:02:37	13-SEP	657.12	125.00	126.55	1594.53	1508.15	0.5000
15:07:37	13-SEP	662.12	130.00	126.55	1609.83	1523.45	0.4885
15:12:37	13-SEP	667.12	135.00	126.55	1624.14	1537.76	0.4775
15:17:37	13-SEP	672.12	140.00	126.55	1637.54	1551.16	0.4670
15:22:37	13-SEP	677.12	145.00	126.55	1650.25	1563.87	0.4570
15:27:37	13-SEP	682.12	150.00	126.55	1662.39	1576.01	0.4475
15:32:37	13-SEP	687.12	155.00	126.55	1673.84	1587.46	0.4384
15:37:37	13-SEP	692.12	160.00	126.55	1684.91	1598.53	0.4297
15:42:37	13-SEP	697.12	165.00	126.55	1695.23	1608.85	0.4213
15:47:37	13-SEP	702.12	170.00	126.57	1705.34	1618.96	0.4133
15:52:37	13-SEP	707.12	175.00	126.57	1715.05	1628.67	0.4056
15:57:37	13-SEP	712.12	180.00	126.57	1724.39	1638.01	0.3983
16:12:37	13-SEP	727.12	195.00	126.59	1750.23	1663.85	0.3777
16:27:37	13-SEP	742.12	210.00	126.61	1773.59	1687.21	0.3593
16:42:37	13-SEP	757.12	225.00	126.64	1794.59	1708.21	0.3427
16:57:37	13-SEP	772.12	240.00	126.66	1813.39	1727.01	0.3276
17:12:37	13-SEP	787.12	255.00	126.70	1830.78	1744.40	0.3139
17:27:37	13-SEP	802.12	270.00	126.72	1846.94	1760.56	0.3013
17:42:37	13-SEP	817.12	285.00	126.75	1862.06	1775.68	0.2897
17:57:37	13-SEP	832.12	300.00	126.79	1876.14	1789.76	0.2790
18:12:37	13-SEP	847.12	315.00	126.82	1889.26	1802.88	0.2691
18:27:37	13-SEP	862.12	330.00	126.86	1901.56	1815.18	0.2599
18:42:37	13-SEP	877.12	345.00	126.90	1913.04	1826.66	0.2513
18:57:37	13-SEP	892.12	360.00	126.93	1923.77	1837.39	0.2433
19:12:37	13-SEP	907.12	375.00	126.95	1933.99	1847.61	0.2358
19:27:37	13-SEP	922.12	390.00	126.99	1943.95	1857.57	0.2287
19:42:37	13-SEP	937.12	405.00	127.02	1953.56	1867.18	0.2221
19:57:37	13-SEP	952.12	420.00	127.06	1962.71	1876.33	0.2158
20:12:37	13-SEP	967.12	435.00	127.09	1971.42	1885.04	0.2099
20:27:37	13-SEP	982.12	450.00	127.13	1979.62	1893.24	0.2043
20:42:37	13-SEP	997.12	465.00	127.15	1987.40	1901.02	0.1990
20:57:37	13-SEP	1012.12	480.00	127.18	1994.83	1908.45	0.1940
21:12:37	13-SEP	1027.12	495.00	127.22	2001.90	1915.52	0.1892
21:27:37	13-SEP	1042.12	510.00	127.26	2008.56	1922.18	0.1847
21:42:37	13-SEP	1057.12	525.00	127.29	2015.05	1928.67	0.1804
21:57:37	13-SEP	1072.12	540.00	127.33	2021.21	1934.83	0.1763
22:12:37	13-SEP	1087.12	555.00	127.36	2027.04	1940.66	0.1723
22:27:37	13-SEP	1102.12	570.00	127.40	2032.65	1946.27	0.1686
22:42:37	13-SEP	1117.12	585.00	127.42	2038.01	1951.63	0.1650
22:57:37	13-SEP	1132.12	600.00	127.45	2043.17	1956.79	0.1615

TEST PHASE: SHUTIN PERIOD # 2 FINAL FLOW PRESSURE = 86.38 PSIA
PRODUCING TIME = 270.33 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
23:12:37	13-SEP	1147.12	615.00	127.49	2048.03	1961.65	0.1582
23:27:37	13-SEP	1162.12	630.00	127.53	2052.79	1966.41	0.1551
23:42:37	13-SEP	1177.12	645.00	127.56	2057.37	1970.99	0.1520
23:57:37	13-SEP	1192.12	660.00	127.60	2061.71	1975.33	0.1491
0:12:37	14-SEP	1207.12	675.00	127.62	2065.95	1979.57	0.1463
0:27:37	14-SEP	1222.12	690.00	127.65	2069.97	1983.59	0.1436
0:42:37	14-SEP	1237.12	705.00	127.69	2073.81	1987.43	0.1410
0:57:37	14-SEP	1252.12	720.00	127.71	2077.56	1991.18	0.1384
1:12:37	14-SEP	1267.12	735.00	127.74	2080.78	1994.40	0.1360
1:27:37	14-SEP	1282.12	750.00	127.78	2083.90	1997.52	0.1337
1:42:37	14-SEP	1297.12	765.00	127.81	2087.78	2001.40	0.1314
1:57:37	14-SEP	1312.12	780.00	127.83	2091.34	2004.96	0.1292
2:12:37	14-SEP	1327.12	795.00	127.87	2094.77	2008.39	0.1271
2:27:37	14-SEP	1342.12	810.00	127.90	2097.84	2011.46	0.1251
2:42:37	14-SEP	1357.12	825.00	127.92	2101.18	2014.80	0.1231
2:57:37	14-SEP	1372.12	840.00	127.96	2104.34	2017.96	0.1212
3:12:37	14-SEP	1387.12	855.00	127.98	2107.35	2020.97	0.1193
3:27:37	14-SEP	1402.12	870.00	128.01	2110.25	2023.87	0.1175
3:42:37	14-SEP	1417.12	885.00	128.05	2113.09	2026.71	0.1158
3:57:37	14-SEP	1432.12	900.00	128.07	2115.80	2029.42	0.1141
4:12:37	14-SEP	1447.12	915.00	128.10	2118.50	2032.12	0.1124
4:27:37	14-SEP	1462.12	930.00	128.12	2121.09	2034.71	0.1108
4:42:37	14-SEP	1477.12	945.00	128.16	2123.61	2037.23	0.1093
4:57:37	14-SEP	1492.12	960.00	128.17	2126.09	2039.71	0.1078
5:12:37	14-SEP	1507.12	975.00	128.21	2128.50	2042.12	0.1063
5:27:37	14-SEP	1522.12	990.00	128.23	2130.85	2044.47	0.1048
5:42:37	14-SEP	1537.12	1005.00	128.26	2133.14	2046.76	0.1035
5:57:37	14-SEP	1552.12	1020.00	128.28	2135.38	2049.00	0.1021
6:00:07	14-SEP	1554.62	1022.50	128.28	2133.81	2047.43	0.1019

CONFIDENTIAL

REPORT NO. 139706
PAGE NO. 1

TEST DATE: 16-SEP-1996

S T A R

Schlumberger Testing Data Report

Pressure Data Report

COMPANY: PETRAL EXPLORATION

WELL: KNOCKDHU #2 - DST #3

TEST IDENTIFICATION

Test Type	OPEN HOLE DST
Test No.	THREE
Formation	ISMAY
Test Interval (ft)	5564 to 5629
Depth Reference	KB

WELL LOCATION

Field	
County	SAN JUAN
State	UTAH
Sec/Twn/Rng	33/37S/25E
Elevation (ft)	5437

HOLE CONDITIONS

Total Depth (MD/TVD) (ft)	5629'
Hole Size (in)	7.875
Casing/Liner I.D. (in)	8.625 @ 1618'
Perf'd Interval/Net Pay (ft)	/ 10
Shot Density/Diameter (in)	

MUD PROPERTIES

Mud Type	F/W GEL & PAC
Mud Weight (lb/gal)	9.7
Mud Resistivity (ohm.m)	
Filtrate Resistivity (ohm.m)	0.598 @ 60F
Filtrate Chlorides (ppm)	11900

INITIAL TEST CONDITIONS

Initial Hydrostatic (psi)	2913.94
Gas Cushion Type	
Surface Pressure (psi)	
Liquid Cushion Type	
Cushion Length (ft)	

TEST STRING CONFIGURATION

Pipe Length (ft)/I.D. (in)	0 /
Collar Length (ft)/I.D. (in)	4956 / 7.75
Packer Depths (ft)	5520,5565,5572,
Bottomhole Choke Size (in)	0.94
Gauge Depth (ft)/Type	5570/SLSR-777

NET PIPE RECOVERY

Volume	Fluid Type	Properties
468 ft	HEAVY GAS &	Rw0.326@60F 23000ppm
	SLIGHT OIL	
	CUT MUD	
90 ft	WATER CUT	Rw0.134@60F 62000ppm
	MUD	

NET SAMPLE CHAMBER RECOVERY

Volume	Fluid Type	Properties
0.65 cuft	Gas	
200 cc	Oil	API 40.4@60F
850 cc	Water	Rw0.115@60F 74000pp
100 cc	Mud	Rw 0.115@60F 74000p
Pressure: 180	GOR: 516	GLR: 90

INTERPRETATION RESULTS

Model of Behavior	
Fluid Type Used for Analysis	
Reservoir Pressure (psi)	
Transmissibility (md.ft/cp)	
Effective Permeability (md)	
Skin Factor/Damage Ratio	
Storativity Ratio, Omega	
Interporos.Flow Coef.,Lambda	
Distance to an Anomaly (ft)	
Radius of Investigation (ft)	
Potentiometric Surface (ft)	

ROCK/FLUID/WELLBORE PROPERTIES

Oil Density (deg. API)	
Basic Solids (%)	
Gas Gravity	
GOR (scf/STB)	
Water Cut (%)	
Viscosity (cp)	
Total Compressibility (1/psi)	
Porosity (%)	7
Reservoir Temperature (F)	127
Form.Vol.Factor (bbl/STB)	

PRODUCTION RATE DURING TEST: Data Report

COMMENTS:

This on bottom conventional D.S.T. of the Ismay formation was a success. The total recovery was 2.7 bbls. At the to was 2.29 bbls. of heavily gas cut and slightly oil cut drilling mud becoming more heavily gas cut near the bottom. On bottom was .41 bbls. of water cut mud. Thank you for using Schlumberger.

WELL TEST INTERPRETATION REPORT #:139706 CLIENT : PETRAL EXPLORATION		PAGE: 2, 20-SEP-96
REGION :CSD DISTRICT:HOBBS BASE :DENVER, CO ENGINEER:BILL GRAYSHAW	SEQUENCE OF EVENTS	FIELD: ZONE :ISMAY WELL :KNOCKOHU #2 LOCATION:33/37S/25E

DATE	TIME (HR:MIN)	DESCRIPTION	ET (MINS)	BHP (PSIA)	WHP (PSIG)
16-SEP		OPEN TO BUBBLE HOSE ONLY			
	06:42	HYDROSTATIC MUD	-4	2914	
	06:43	SET PACKERS	-3		
	06:46	START FLOW	0	102	
		B.O.B. @ 25 SECONDS			
	06:47		1		1#
	06:48		2		2#
	06:49		3		2.6#
	06:50		4		3#
	06:51		5		3.4#
	06:56		10		5#
	07:01		15		6#
	07:11		25		7#
	07:16	END FLOW & START SHUT-IN	30	157	7.8#
	07:20	OPEN TO 1" CHOKE ONLY	34		
	08:15	OPEN TO BUBBLE HOSE ONLY	89		
	08:16	END SHUT-IN	90	1512	
	08:20	FLOW POINT - TOOL OPEN	94		5"
	08:21	START FLOW	95	113	3.5#
	08:22		96		5#
	08:25	OPEN TO 1/8" CHOKE ONLY	99		5.6#
	08:30		104		5.9#
	08:35	GAS TO SURFACE	109		5.8#
	09:00		134		5.4#
	09:30		164		6.4#
	10:00		194		7.2#
	10:20	END FLOW & START SHUT-IN	214	263	7.4#
	12:20	END SHUT-IN	334	1725	
	12:23	PULL PACKERS LOOSE	337		
	12:24	HYDROSTATIC MUD	338	2905	

WELL TEST INTERPRET ON REPORT #:139706 CLIENT : PETRAL EXPLORATION		PAGE: 12, 20-SEP-96
REGION :CSD DISTRICT:HOBBS BASE :DENVER, CO ENGINEER:BILL GRAYSHAW	DISTRIBUTION OF REPORTS	FIELD: ZONE :ISMAY WELL :KNOCKDHU #2 LOCATION:33/37S/25E

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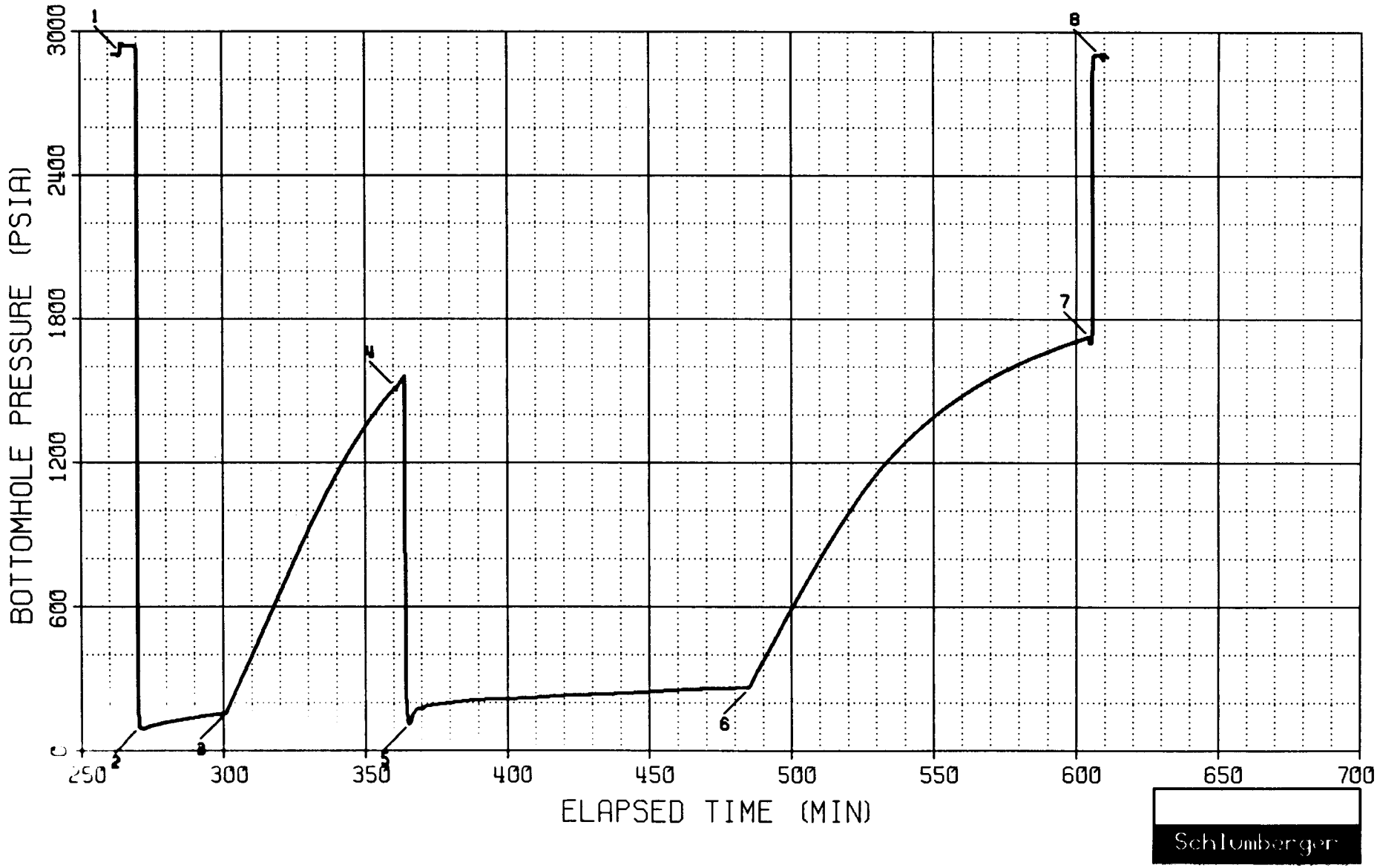
SCHLUMBERGER

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-777
DEPTH : 5570 FT
CAPACITY : 10000 PSI
PORT OPENING : INSIDE

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

Electronic Pressure Data

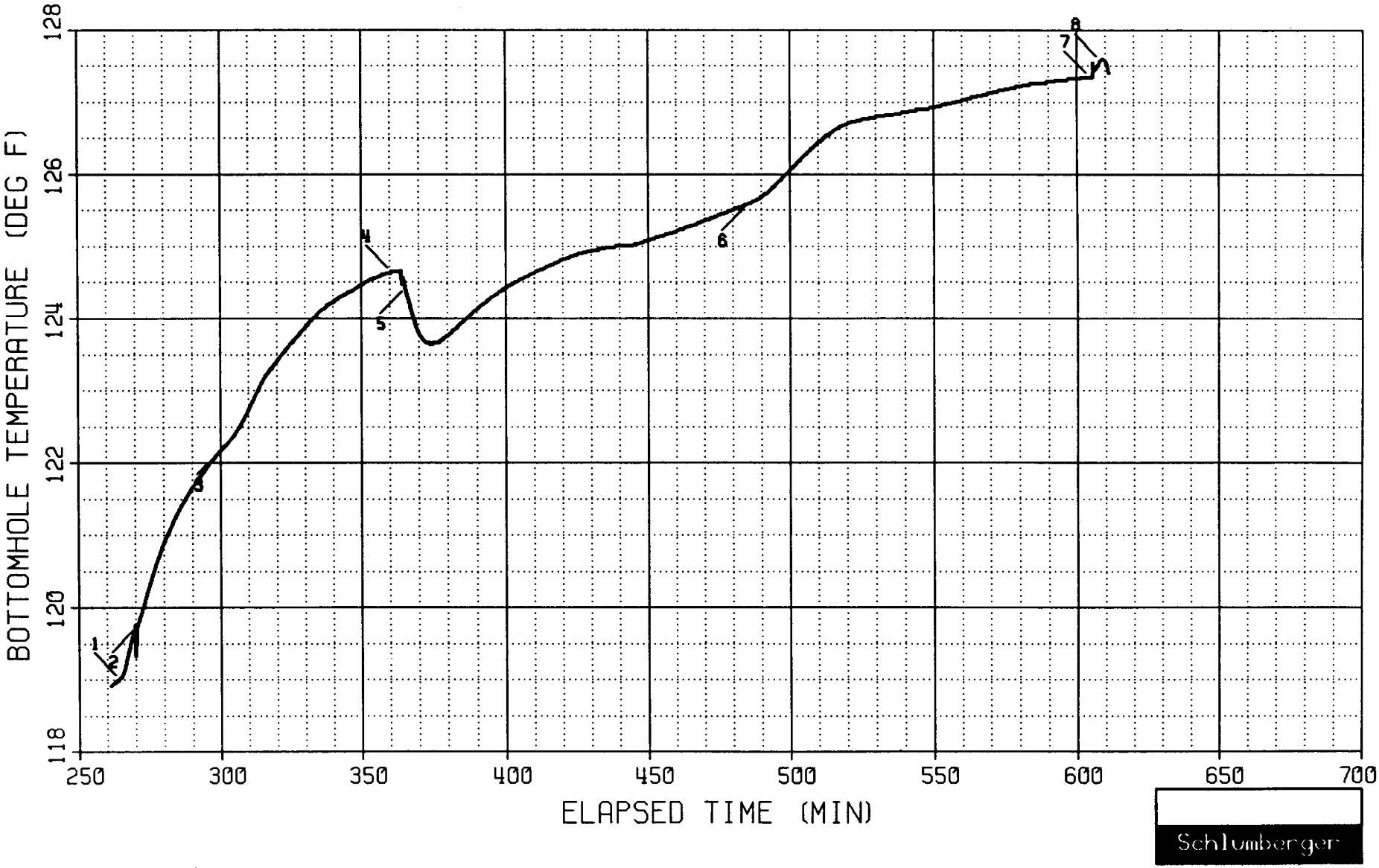


BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-777
DEPTH : 5570 FT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

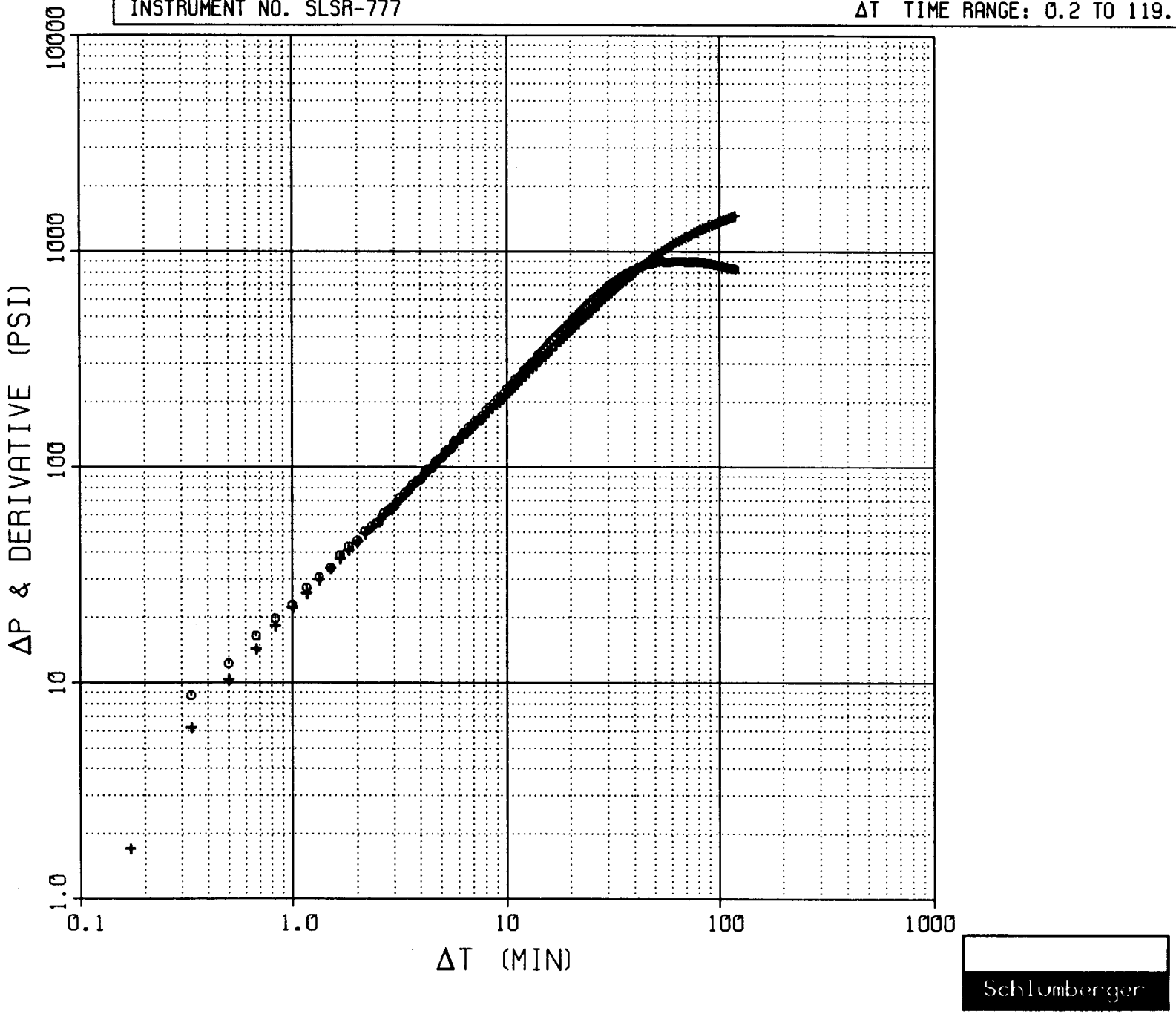
Electronic Temperature Data

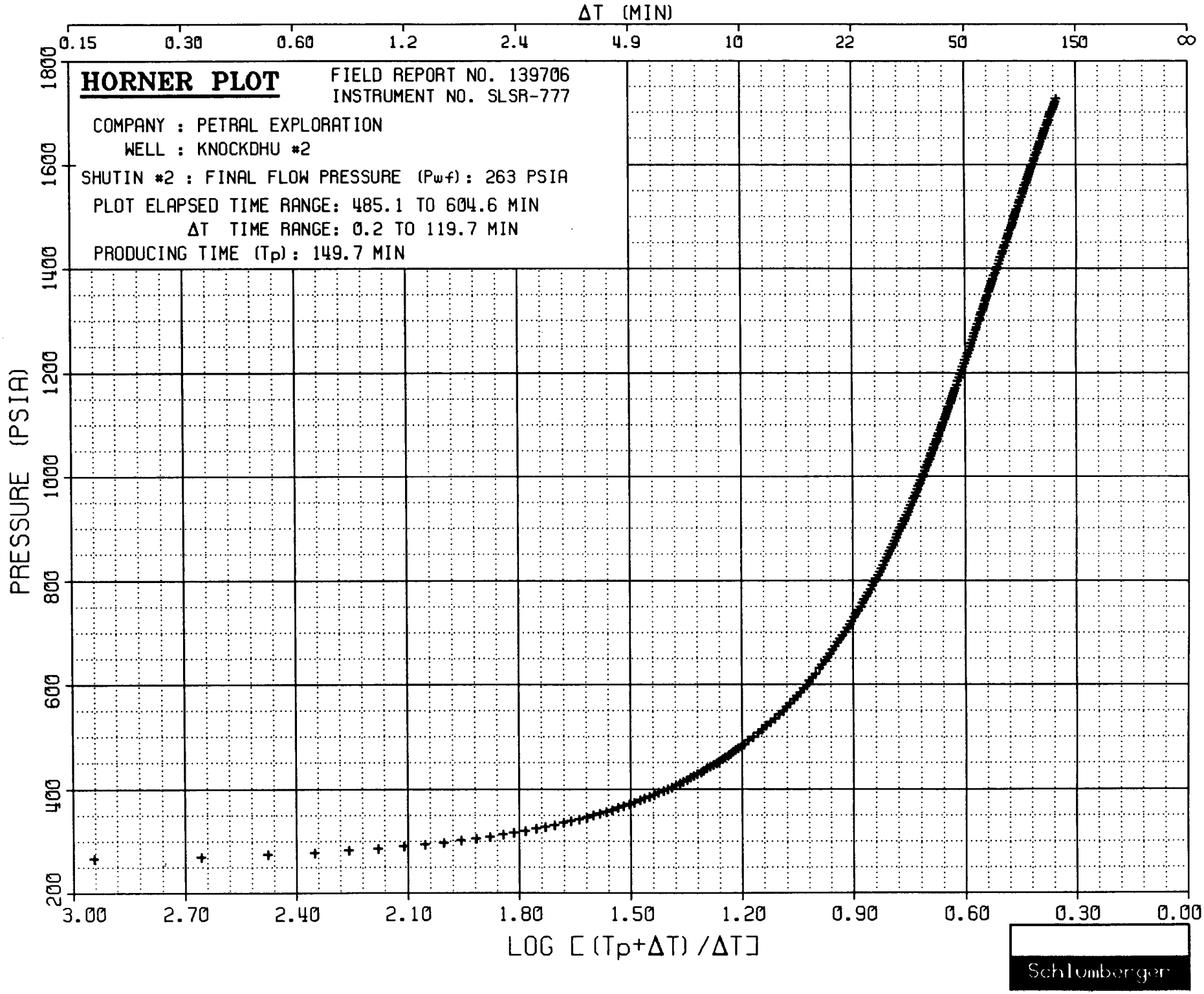


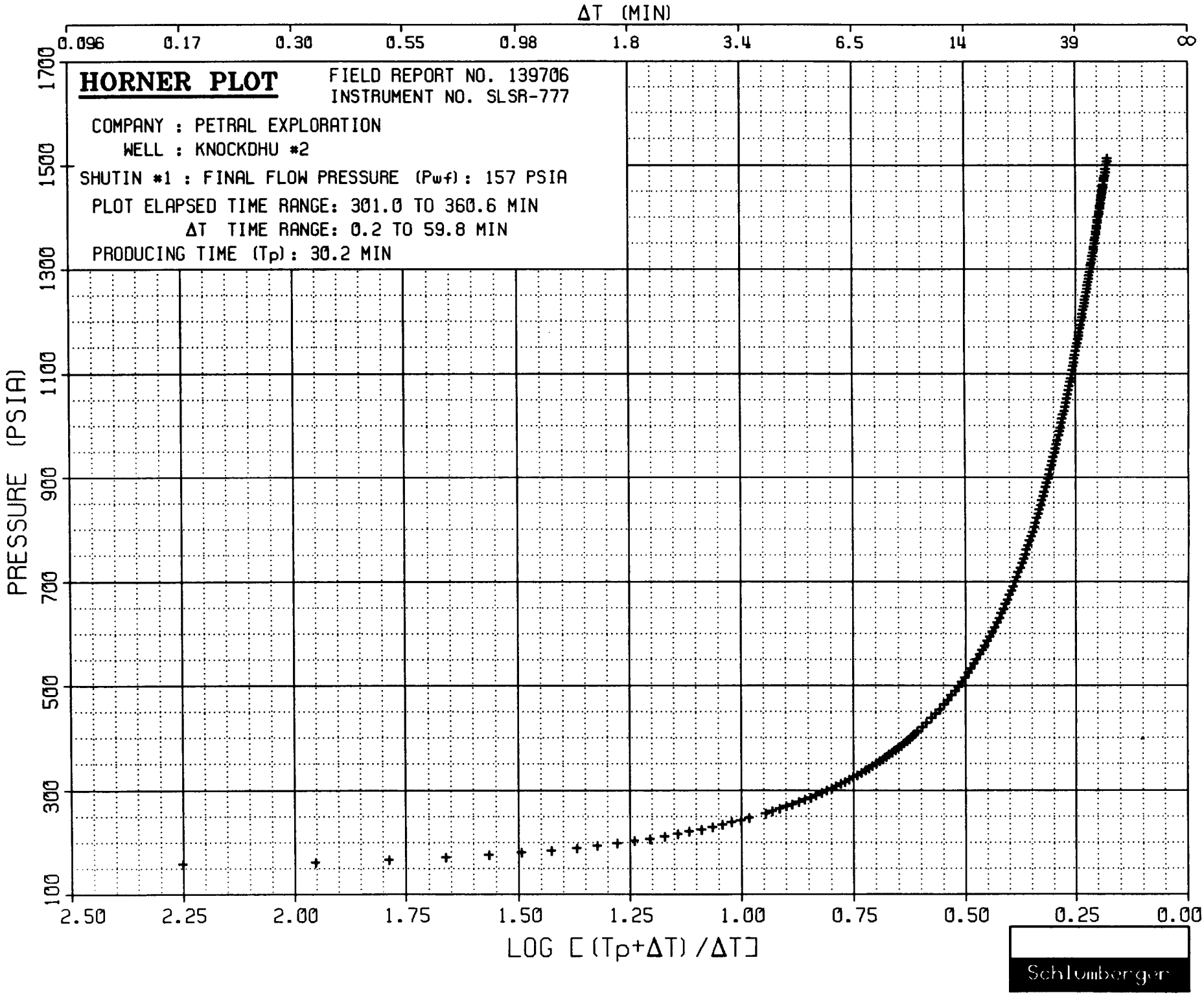
LOG LOG PLOT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-777

SHUTIN #2 : PRODUCING TIME (Tp) : 149.7 MIN
FINAL FLOW PRESSURE (Pwf) : 263 PSIA
PLOT ELAPSED TIME RANGE: 485.1 TO 604.6 MIN
ΔT TIME RANGE: 0.2 TO 119.7 MIN




ΔT (MIN)
0.15
0.30
0.60
1.2
2.4
4.9
10
22
50
150
∞
HORNER PLOT
FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-777
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #2 : FINAL FLOW PRESSURE (Pwf) : 263 PSIA
PLOT ELAPSED TIME RANGE: 485.1 TO 604.6 MIN
ΔT TIME RANGE: 0.2 TO 119.7 MIN
PRODUCING TIME (Tp) : 149.7 MIN
PRESSURE (PSIA)
1800
1600
1400
1200
1000
800
600
400
200
3.00
2.70
2.40
2.10
1.80
1.50
1.20
0.90
0.60
0.30
0.00
LOG [(Tp+ΔT)/ΔT]
Schlumberger


ΔT (MIN)
0.096
0.17
0.30
0.55
0.98
1.8
3.4
6.5
14
39
∞
HORNER PLOT
FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-777
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #1 : FINAL FLOW PRESSURE (Pwf) : 157 PSIA
PLOT ELAPSED TIME RANGE: 301.0 TO 360.6 MIN
ΔT TIME RANGE: 0.2 TO 59.8 MIN
PRODUCING TIME (Tp) : 30.2 MIN
PRESSURE (PSIA)
1700
1500
1300
1100
900
700
500
300
100
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
LOG [(Tp+ΔT)/ΔT]
Schlumberger

****
** WELL TEST DATA PRINTOUT **
****

COMPANY: PETRAL EXPLORATION
WELL: KNOCKDHU #2

FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-777

RECORDER CAPACITY: 10000 PSI PORT OPENING: INSIDE DEPTH: 5570 FT

LABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DD-MMM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA	BOT HOLE TEMP. DEG F
1	6:40:32	16-SEP	HYDROSTATIC MUD	264.28	2913.94	119.01
2	6:46:52	16-SEP	START FLOW	270.62	101.52	119.75
3	7:17:02	16-SEP	END FLOW & START SHUT-IN	300.78	156.65	122.20
4	8:16:52	16-SEP	END SHUT-IN	360.62	1512.23	124.65
5	8:21:42	16-SEP	START FLOW	365.45	113.44	124.43
6	10:21:12	16-SEP	END FLOW & START SHUT-IN	484.95	263.45	125.58
7	12:20:52	16-SEP	END SHUT-IN	604.62	1725.36	127.35
8	12:24:32	16-SEP	HYDROSTATIC MUD	608.28	2905.03	127.58

SUMMARY OF FLOW PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	INITIAL PRESSURE PSIA
1	270.62	300.78	30.16	101.52	156.65	101.52
2	365.45	484.95	119.50	113.44	263.45	113.44

SUMMARY OF SHUTIN PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	300.78	360.62	59.84	156.65	1512.23	156.65	30.16
2	484.95	604.62	119.67	263.45	1725.36	263.45	149.66

TEST PHASE: FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
6:46:52	16-SEP	270.62	0.00	119.75	101.52
7:01:52	16-SEP	285.62	15.00	121.37	130.08
7:16:52	16-SEP	300.62	30.00	122.18	156.58
7:17:02	16-SEP	300.78	30.16	122.20	156.65

TEST PHASE: SHUTIN PERIOD # 1

FINAL FLOW PRESSURE = 156.65 PSIA
PRODUCING TIME = 30.16 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:17:02	16-SEP	300.78	0.00	122.20	156.65	0.00	
7:18:02	16-SEP	301.78	1.00	122.23	179.66	23.01	1.4936
7:19:02	16-SEP	302.78	2.00	122.27	206.62	49.97	1.2063
7:20:02	16-SEP	303.78	3.00	122.32	233.19	76.54	1.0435
7:21:02	16-SEP	304.78	4.00	122.38	259.35	102.70	0.9315
7:22:02	16-SEP	305.78	5.00	122.43	285.46	128.81	0.8471
7:23:02	16-SEP	306.78	6.00	122.50	311.41	154.76	0.7801
7:24:02	16-SEP	307.78	7.00	122.56	337.39	180.74	0.7250
7:25:02	16-SEP	308.78	8.00	122.63	363.33	206.68	0.6785
7:26:02	16-SEP	309.78	9.00	122.72	389.33	232.68	0.6386
7:27:02	16-SEP	310.78	10.00	122.79	415.21	258.56	0.6038
7:29:02	16-SEP	312.78	12.00	122.95	466.99	310.34	0.5457
7:31:02	16-SEP	314.78	14.00	123.12	519.32	362.67	0.4989
7:33:02	16-SEP	316.78	16.00	123.24	571.83	415.18	0.4601
7:35:02	16-SEP	318.78	18.00	123.35	624.55	467.90	0.4274
7:37:02	16-SEP	320.78	20.00	123.44	677.21	520.56	0.3993
7:39:02	16-SEP	322.78	22.00	123.55	729.54	572.89	0.3749
7:41:02	16-SEP	324.78	24.00	123.64	781.64	624.99	0.3535
7:43:02	16-SEP	326.78	26.00	123.73	833.40	676.75	0.3345
7:45:02	16-SEP	328.78	28.00	123.82	884.22	727.57	0.3175
7:47:02	16-SEP	330.78	30.00	123.91	934.45	777.80	0.3022
7:52:02	16-SEP	335.78	35.00	124.11	1055.37	898.72	0.2699
7:57:02	16-SEP	340.78	40.00	124.25	1168.15	1011.50	0.2440
8:02:02	16-SEP	345.78	45.00	124.38	1270.78	1114.13	0.2228
8:07:02	16-SEP	350.78	50.00	124.48	1362.81	1206.16	0.2050
8:12:02	16-SEP	355.78	55.00	124.57	1443.69	1287.04	0.1899
8:16:52	16-SEP	360.62	59.84	124.65	1512.23	1355.58	0.1773

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
8:21:42	16-SEP	365.45	0.00	124.43	113.44
8:36:42	16-SEP	380.45	15.00	123.78	200.68
8:51:42	16-SEP	395.45	30.00	124.30	215.34
9:06:42	16-SEP	410.45	45.00	124.65	221.99
9:21:42	16-SEP	425.45	60.00	124.90	232.38

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
9:36:42	16-SEP	440.45	75.00	125.01	239.74
9:51:42	16-SEP	455.45	90.00	125.15	250.75
10:06:42	16-SEP	470.45	105.00	125.37	259.26
10:21:12	16-SEP	484.95	119.50	125.58	263.45

TEST PHASE: SHUTIN PERIOD # 2

FINAL FLOW PRESSURE = 263.45 PSIA
PRODUCING TIME = 149.66 MIN

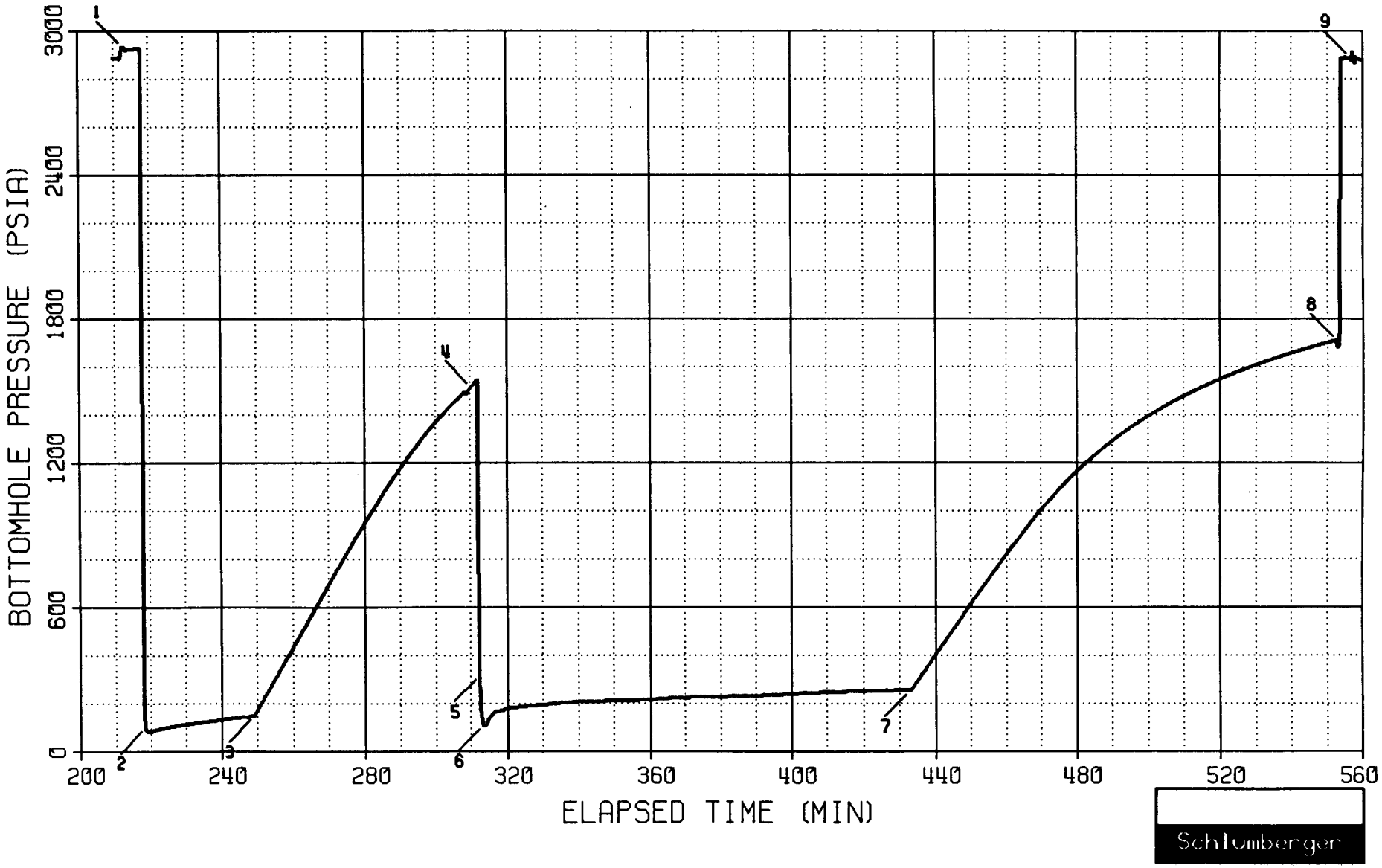
TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:21:12	16-SEP	484.95	0.00	125.58	263.45	0.00	
10:22:12	16-SEP	485.95	1.00	125.60	285.57	22.12	2.1780
10:23:12	16-SEP	486.95	2.00	125.62	308.42	44.97	1.8798
10:24:12	16-SEP	487.95	3.00	125.64	330.58	67.13	1.7066
10:25:12	16-SEP	488.95	4.00	125.65	352.44	88.99	1.5845
10:26:12	16-SEP	489.95	5.00	125.69	374.07	110.62	1.4904
10:27:12	16-SEP	490.95	6.00	125.73	395.71	132.26	1.4140
10:28:12	16-SEP	491.95	7.00	125.74	417.28	153.83	1.3499
10:29:12	16-SEP	492.95	8.00	125.78	438.68	175.23	1.2946
10:30:12	16-SEP	493.95	9.00	125.82	460.12	196.67	1.2462
10:31:12	16-SEP	494.95	10.00	125.85	481.49	218.04	1.2032
10:33:12	16-SEP	496.95	12.00	125.92	524.23	260.78	1.1294
10:35:12	16-SEP	498.95	14.00	126.01	566.83	303.38	1.0678
10:37:12	16-SEP	500.95	16.00	126.09	609.41	345.96	1.0151
10:39:12	16-SEP	502.95	18.00	126.18	651.66	388.21	0.9692
10:41:12	16-SEP	504.95	20.00	126.25	693.39	429.94	0.9285
10:43:12	16-SEP	506.95	22.00	126.34	734.66	471.21	0.8922
10:45:12	16-SEP	508.95	24.00	126.41	775.43	511.98	0.8595
10:47:12	16-SEP	510.95	26.00	126.46	815.60	552.15	0.8297
10:49:12	16-SEP	512.95	28.00	126.54	855.08	591.63	0.8024
10:51:12	16-SEP	514.95	30.00	126.59	893.64	630.19	0.7773
10:56:12	16-SEP	519.95	35.00	126.70	986.15	722.70	0.7223
11:01:12	16-SEP	524.95	40.00	126.77	1071.41	807.96	0.6759
11:06:12	16-SEP	529.95	45.00	126.79	1149.01	885.56	0.6361
11:11:12	16-SEP	534.95	50.00	126.82	1219.31	955.86	0.6013
11:16:12	16-SEP	539.95	55.00	126.86	1282.46	1019.01	0.5707
11:21:12	16-SEP	544.95	60.00	126.90	1338.52	1075.07	0.5434
11:26:12	16-SEP	549.95	65.00	126.93	1389.64	1126.19	0.5188
11:31:12	16-SEP	554.95	70.00	126.99	1435.57	1172.12	0.4967
11:36:12	16-SEP	559.95	75.00	127.04	1477.11	1213.66	0.4765
11:41:12	16-SEP	564.95	80.00	127.08	1515.19	1251.74	0.4580
11:46:12	16-SEP	569.95	85.00	127.13	1550.06	1286.61	0.4410
11:51:12	16-SEP	574.95	90.00	127.17	1582.02	1318.57	0.4254
11:56:12	16-SEP	579.95	95.00	127.22	1611.21	1347.76	0.4108
12:01:12	16-SEP	584.95	100.00	127.26	1638.08	1374.63	0.3973
12:06:12	16-SEP	589.95	105.00	127.29	1662.89	1399.44	0.3848
12:11:12	16-SEP	594.95	110.00	127.31	1685.68	1422.23	0.3730
12:16:12	16-SEP	599.95	115.00	127.33	1707.02	1443.57	0.3620
12:20:52	16-SEP	604.62	119.67	127.35	1725.36	1461.91	0.3523

BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-884
DEPTH : 5539 FT
CAPACITY : 10000 PSI
PORT OPENING : INSIDE

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

Electronic Pressure Data

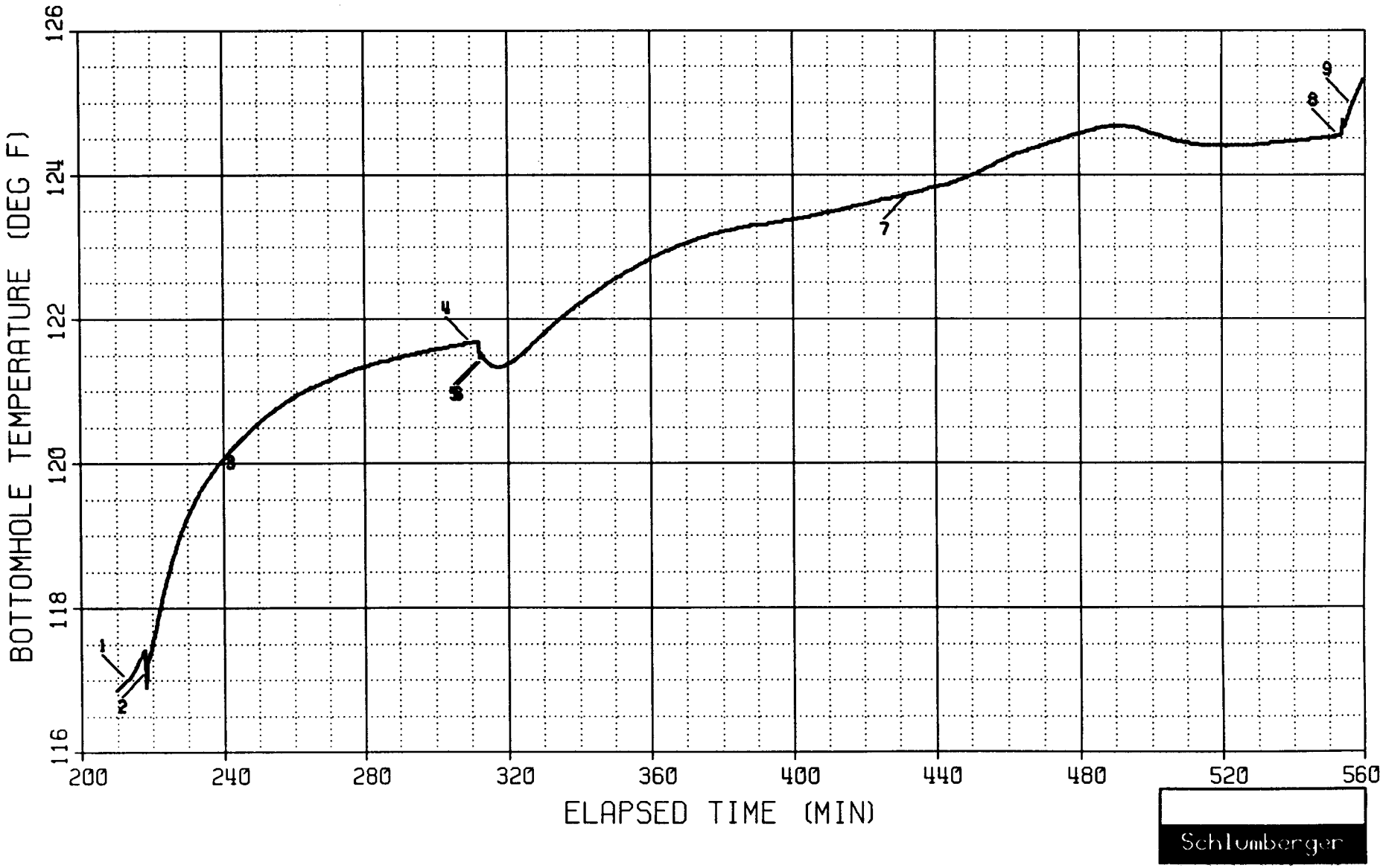


BOTTOMHOLE TEMPERATURE LOG

FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-884
DEPTH : 5539 FT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2

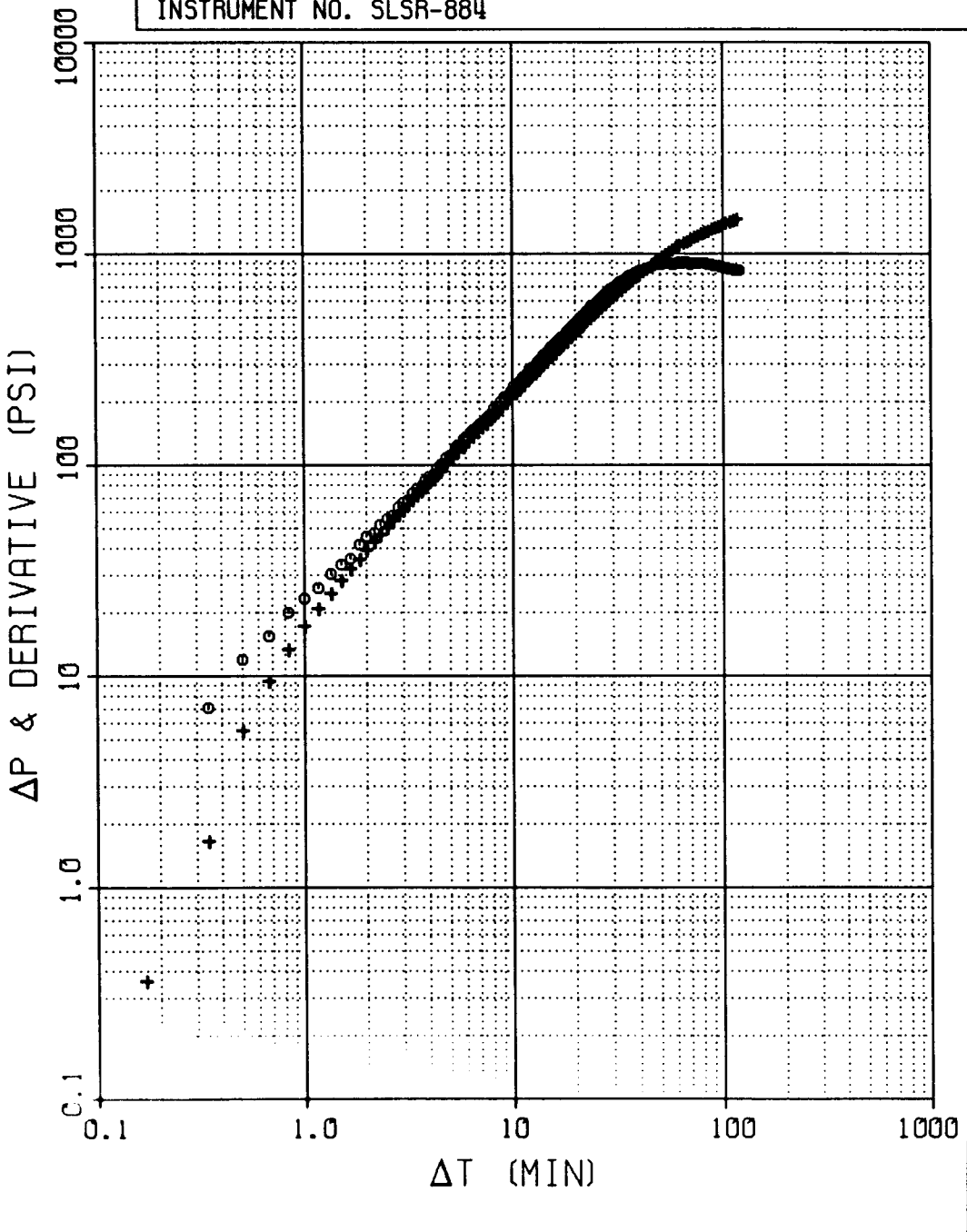
Electronic Temperature Data

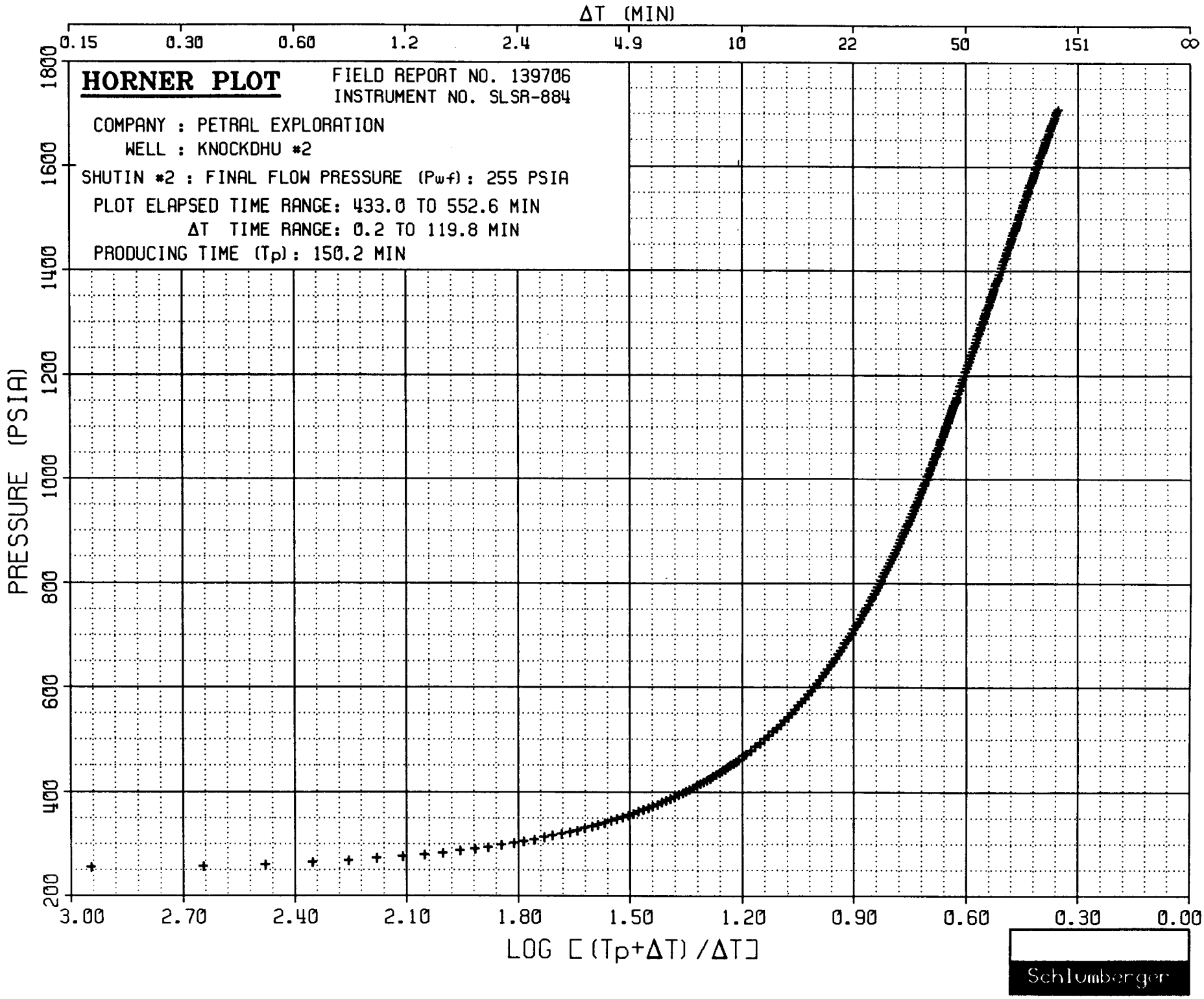


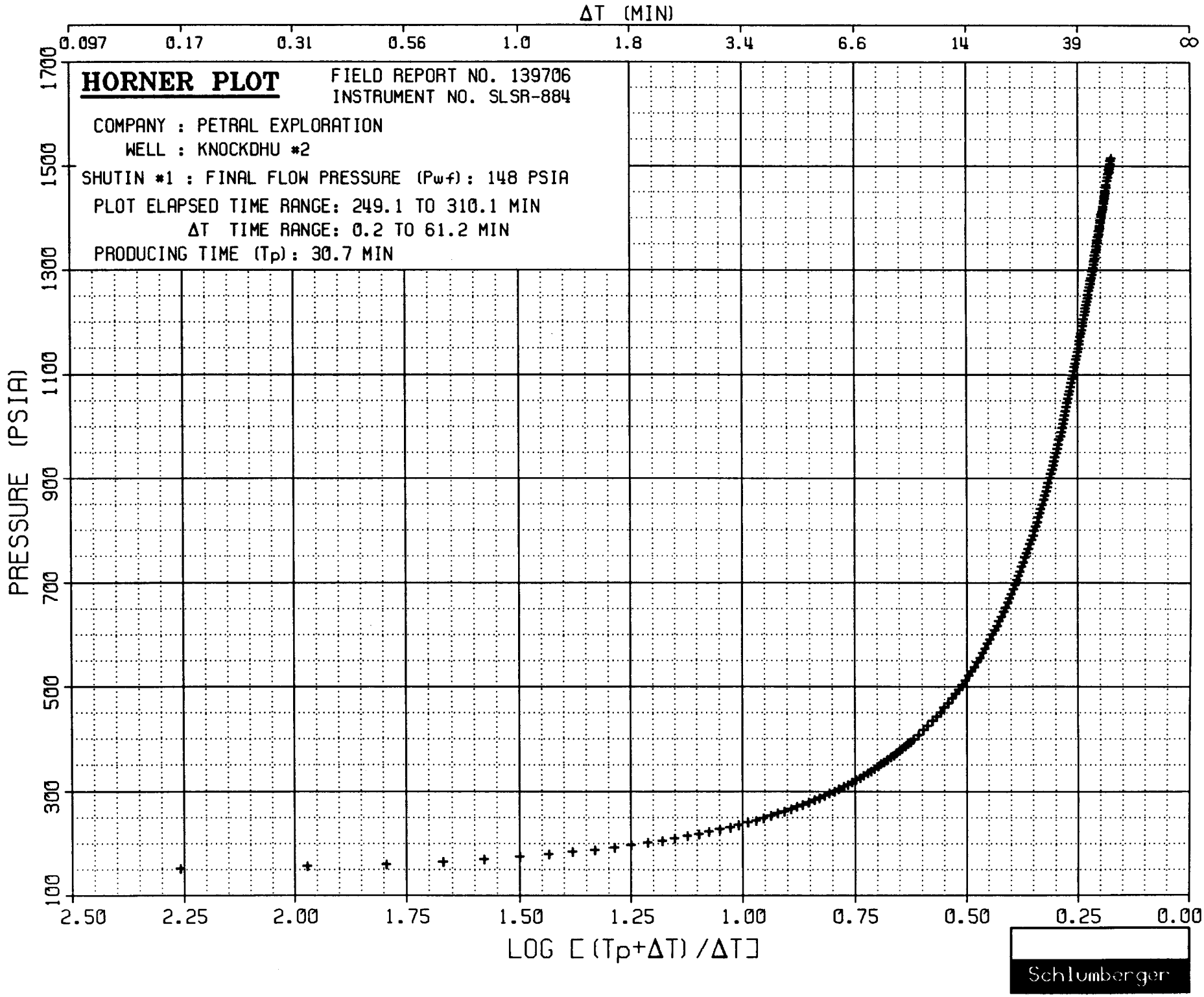
LOG LOG PLOT

COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-884

SHUTIN #2 : PRODUCING TIME (Tp) : 150.2 MIN
FINAL FLOW PRESSURE (Pwf) : 255 PSIA
PLOT ELAPSED TIME RANGE: 433.0 TO 552.6 MIN
ΔT TIME RANGE: 0.2 TO 119.8 MIN




ΔT (MIN)
0.15
0.30
0.60
1.2
2.4
4.9
10
22
50
151
∞
HORNER PLOT
FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-884
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #2 : FINAL FLOW PRESSURE (Pwf) : 255 PSIA
PLOT ELAPSED TIME RANGE: 433.0 TO 552.6 MIN
ΔT TIME RANGE: 0.2 TO 119.8 MIN
PRODUCING TIME (Tp) : 150.2 MIN
PRESSURE (PSIA)
1800
1600
1400
1200
1000
800
600
400
200
3.00
2.70
2.40
2.10
1.80
1.50
1.20
0.90
0.60
0.30
0.00
LOG [(Tp+ΔT)/ΔT]
Schlumberger


ΔT (MIN)
0.097
0.17
0.31
0.56
1.0
1.8
3.4
6.6
14
39
∞
HORNER PLOT
FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-884
COMPANY : PETRAL EXPLORATION
WELL : KNOCKDHU #2
SHUTIN #1 : FINAL FLOW PRESSURE (Pwf): 148 PSIA
PLOT ELAPSED TIME RANGE: 249.1 TO 310.1 MIN
ΔT TIME RANGE: 0.2 TO 61.2 MIN
PRODUCING TIME (Tp): 30.7 MIN
PRESSURE (PSIA)
1700
1500
1300
1100
900
700
500
300
100
2.50
2.25
2.00
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
LOG [(Tp+ΔT)/ΔT]
Schlumberger

****
** WELL TEST DATA PRINTOUT **
****

COMPANY: PETRAL EXPLORATION
WELL: KNOCKDHU #2

FIELD REPORT NO. 139706
INSTRUMENT NO. SLSR-884

RECORDER CAPACITY: 10000 PSI PORT OPENING: INSIDE DEPTH: 5539 FT

LABEL POINT INFORMATION
****

#	TIME OF DAY HH:MM:SS	DATE DD-MMM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA	BOT HOLE TEMP. DEG F
1	6:39:57	16-SEP	HYDROSTATIC MUD	212.78	2933.19	117.00
2	6:45:27	16-SEP	START FLOW	218.28	101.72	117.14
3	7:16:07	16-SEP	END FLOW & START SHUT-IN	248.95	148.49	120.52
4	8:17:17	16-SEP	END SHUT-IN	310.12	1514.11	121.66
5	8:19:27	16-SEP	FLOW POINT	312.28	315.17	121.46
6	8:20:27	16-SEP	START FLOW	313.28	110.61	121.46
7	10:19:57	16-SEP	END FLOW & START SHUT-IN	432.78	254.59	123.75
8	12:19:47	16-SEP	END SHUT-IN	552.62	1711.29	124.54
9	12:23:37	16-SEP	HYDROSTATIC MUD	556.45	2889.94	124.97

SUMMARY OF FLOW PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	INITIAL PRESSURE PSIA
1	218.28	248.95	30.67	101.72	148.49	101.72
2	313.28	432.78	119.50	110.61	254.59	110.61

SUMMARY OF SHUTIN PERIODS
****

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	248.95	310.12	61.17	148.49	1514.11	148.49	30.67
2	432.78	552.62	119.84	254.59	1711.29	254.59	150.17

TEST PHASE: FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
6:45:27	16-SEP	218.28	0.00	117.14	101.72
7:00:27	16-SEP	233.28	15.00	119.61	119.87
7:15:27	16-SEP	248.28	30.00	120.49	147.47
7:16:07	16-SEP	248.95	30.67	120.52	148.49

TEST PHASE: SHUTIN PERIOD # 1

FINAL FLOW PRESSURE = 148.49 PSIA
PRODUCING TIME = 30.67 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:16:07	16-SEP	248.95	0.00	120.52	148.49	0.00	
7:17:07	16-SEP	249.95	1.00	120.56	173.76	25.27	1.5006
7:18:07	16-SEP	250.95	2.00	120.60	200.44	51.95	1.2131
7:19:07	16-SEP	251.95	3.00	120.65	226.58	78.09	1.0501
7:20:07	16-SEP	252.95	4.00	120.69	252.41	103.92	0.9379
7:21:07	16-SEP	253.95	5.00	120.72	278.24	129.75	0.8533
7:22:07	16-SEP	254.95	6.00	120.76	304.13	155.64	0.7862
7:23:07	16-SEP	255.95	7.00	120.79	329.88	181.39	0.7309
7:24:07	16-SEP	256.95	8.00	120.81	355.78	207.29	0.6843
7:25:07	16-SEP	257.95	9.00	120.85	381.77	233.28	0.6442
7:26:07	16-SEP	258.95	10.00	120.88	407.61	259.12	0.6093
7:28:07	16-SEP	260.95	12.00	120.94	459.33	310.84	0.5509
7:30:07	16-SEP	262.95	14.00	120.99	511.61	363.12	0.5039
7:32:07	16-SEP	264.95	16.00	121.05	563.79	415.30	0.4649
7:34:07	16-SEP	266.95	18.00	121.08	616.36	467.87	0.4320
7:36:07	16-SEP	268.95	20.00	121.14	668.67	520.18	0.4037
7:38:07	16-SEP	270.95	22.00	121.17	720.73	572.24	0.3791
7:40:07	16-SEP	272.95	24.00	121.21	772.48	623.99	0.3575
7:42:07	16-SEP	274.95	26.00	121.26	823.80	675.31	0.3384
7:44:07	16-SEP	276.95	28.00	121.30	874.30	725.81	0.3213
7:46:07	16-SEP	278.95	30.00	121.32	924.18	775.69	0.3059
7:51:07	16-SEP	283.95	35.00	121.39	1044.54	896.05	0.2733
7:56:07	16-SEP	288.95	40.00	121.46	1156.55	1008.06	0.2472
8:01:07	16-SEP	293.95	45.00	121.51	1259.14	1110.65	0.2257
8:06:07	16-SEP	298.95	50.00	121.57	1350.82	1202.33	0.2077
8:11:07	16-SEP	303.95	55.00	121.62	1431.29	1282.80	0.1925
8:16:07	16-SEP	308.95	60.00	121.66	1487.80	1339.31	0.1793
8:17:17	16-SEP	310.12	61.17	121.66	1514.11	1365.62	0.1765

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
8:20:27	16-SEP	313.28	0.00	121.46	110.61
8:35:27	16-SEP	328.28	15.00	121.71	193.88
8:50:27	16-SEP	343.28	30.00	122.32	208.31
9:05:27	16-SEP	358.28	45.00	122.79	215.07

TEST PHASE: FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA
9:20:27	16-SEP	373.28	60.00	123.12	227.11
9:35:27	16-SEP	388.28	75.00	123.30	232.29
9:50:27	16-SEP	403.28	90.00	123.42	242.87
10:05:27	16-SEP	418.28	105.00	123.57	251.52
10:19:57	16-SEP	432.78	119.50	123.75	254.59

TEST PHASE: SHUTIN PERIOD # 2

FINAL FLOW PRESSURE = 254.59 PSIA
PRODUCING TIME = 150.17 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:19:57	16-SEP	432.78	0.00	123.75	254.59	0.00	
10:20:57	16-SEP	433.78	1.00	123.75	271.60	17.01	2.1795
10:21:57	16-SEP	434.78	2.00	123.76	293.69	39.10	1.8813
10:22:57	16-SEP	435.78	3.00	123.78	315.41	60.82	1.7081
10:23:57	16-SEP	436.78	4.00	123.80	336.74	82.15	1.5859
10:24:57	16-SEP	437.78	5.00	123.80	358.04	103.45	1.4918
10:25:57	16-SEP	438.78	6.00	123.82	379.42	124.83	1.4154
10:26:57	16-SEP	439.78	7.00	123.84	400.70	146.11	1.3513
10:27:57	16-SEP	440.78	8.00	123.84	421.93	167.34	1.2960
10:28:57	16-SEP	441.78	9.00	123.85	443.21	188.62	1.2476
10:29:57	16-SEP	442.78	10.00	123.87	464.39	209.80	1.2046
10:31:57	16-SEP	444.78	12.00	123.89	507.10	252.51	1.1308
10:33:57	16-SEP	446.78	14.00	123.93	549.73	295.14	1.0692
10:35:57	16-SEP	448.78	16.00	123.96	592.20	337.61	1.0164
10:37:57	16-SEP	450.78	18.00	124.02	634.34	379.75	0.9705
10:39:57	16-SEP	452.78	20.00	124.05	676.02	421.43	0.9299
10:41:57	16-SEP	454.78	22.00	124.11	717.27	462.68	0.8935
10:43:57	16-SEP	456.78	24.00	124.16	757.95	503.36	0.8608
10:45:57	16-SEP	458.78	26.00	124.21	798.09	543.50	0.8310
10:47:57	16-SEP	460.78	28.00	124.25	837.60	583.01	0.8037
10:49:57	16-SEP	462.78	30.00	124.30	876.21	621.62	0.7786
10:54:57	16-SEP	467.78	35.00	124.38	968.80	714.21	0.7235
10:59:57	16-SEP	472.78	40.00	124.47	1054.30	799.71	0.6771
11:04:57	16-SEP	477.78	45.00	124.54	1132.17	877.58	0.6372
11:09:57	16-SEP	482.78	50.00	124.61	1202.65	948.06	0.6024
11:14:57	16-SEP	487.78	55.00	124.66	1266.09	1011.50	0.5718
11:19:57	16-SEP	492.78	60.00	124.68	1322.31	1067.72	0.5444
11:24:57	16-SEP	497.78	65.00	124.63	1373.56	1118.97	0.5199
11:29:57	16-SEP	502.78	70.00	124.54	1419.72	1165.13	0.4977
11:34:57	16-SEP	507.78	75.00	124.47	1461.47	1206.88	0.4774
11:39:57	16-SEP	512.78	80.00	124.43	1499.74	1245.15	0.4590
11:44:57	16-SEP	517.78	85.00	124.41	1534.77	1280.18	0.4420
11:49:57	16-SEP	522.78	90.00	124.41	1566.71	1312.12	0.4263
11:54:57	16-SEP	527.78	95.00	124.41	1596.08	1341.49	0.4117
11:59:57	16-SEP	532.78	100.00	124.43	1623.07	1368.48	0.3982
12:04:57	16-SEP	537.78	105.00	124.47	1647.91	1393.32	0.3856
12:09:57	16-SEP	542.78	110.00	124.48	1670.83	1416.24	0.3739
12:14:57	16-SEP	547.78	115.00	124.50	1692.17	1437.58	0.3628

TEST PHASE: SHUTIN PERIOD # 2 FINAL FLOW PRESSURE = 254.59 PSIA
PRODUCING TIME = 150.17 MIN

TIME OF DAY HH:MM:SS	DATE DD-MMM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE TEMP. DEG F	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
12:19:47	16-SEP	552.62	119.84	124.54	1711.29	1456.70	0.3528

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
OCT 25 1996
DIV. OF OIL, GAS & MINING

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: UTU-065915
6. If Indian, Allottee or Tribe Name: NA
7. If Unit or CA, Agreement Designation: Knockdhu Unit 75040X
8. Well Name and No.: 2
9. API Well No.: 43-037-31779
10. Field and Pool, or Exploratory Area: Unnamed
11. County or Parish, State: San Juan Co., UT

1. Type of Well: [XX] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator: Petral Exploration, LLC
3. Address and Telephone No.: c/o McIlnay & Associates, Inc. 2305 Oxford Lane, Casper, WY 82640 (307) 265-4351
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[XX] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[XX] Other _____	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

An extension to the 30 day suspension of operations period is requested of the BLM for the Knockdhu Unit #2. Operations were suspended for this well on 9/20/96. The Operator, Petral Exploration, has made the decision to install 5 1/2" 15.5#/ft., J or K-55 casing at a depth of 5870' KB and attempt a completion of the Upper Ismay Mound. Currently the Operator is waiting on a completion unit of sufficient size to start the project. As soon as such a unit is available, the project will be commenced.

CONFIDENTIAL

14. I hereby certify that the foregoing is true and correct
Signed _____ Title McIlnay & Associates, Inc. Consulting Engineers Date 10-21-96

(This space for Federal or State office use)
Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Accepted by the Utah Division of Oil, Gas and Mining

FOR RECORD ONLY

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: November 1, 1996
pages: 2 , including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

Daily Completion Reports

Petral Exploration, LLC
Knochdhu Unit #2, UTU-065915
API No. 43-037-31779
SE NW SE Sec. 33-T37S-R25E
San Juan Co., UT

10-28-96
Big "A" workover unit will move in and rig up Tuesday 10-29-96. Casing and tubing will be delivered Wednesday AM. Will start picking up tubing and conditioning hole Wednesday. Anticipate running casing Friday.

10-29-96
Moving of Big "A" rig delay due to rain and resulting bad roads. Still lightly raining in Cortez this A.M.

10-30-96
Waiting on roads and location to dry up. Cannot move today.

10-31-96
Location still to wet to move in completion rig. Moving Big "A" rig to vicinity of location today and as soon as weather permits will move in and start project. This A.M. light mist.

11-1-96
Work done 10/31/96. Started 12 PM. Chained up Big "A" completion rig and moved in and began to rig up. Anticipate will be finished with rig up by 12 PM 11/1/96. Will start picking up tubing to condition hole. 5 1/2" casing to be delivered Saturday 11/2/96 AM.

ROUTINE CORE ANALYSIS PROGRAM

PETRAL EXPLORATION

Knockdhu Unit #2 Well
San Juan County, Utah

Prepared for:

PETRAL EXPLORATION
P.O. Box 5083
Denver, Colorado 80217

Attn.: Mr. Bob Coskey

CONFIDENTIAL

43 037 31779
DRL
37S 25E 33
NWSE
1950FSL 1573FEL

TR96-6177
November 1996

TerraTek

TerraTek, Inc.
University Research Park
400 Wakara Way
Salt Lake City, Utah 84108 U.S.A.

MICROFICHE

ROUTINE CORE ANALYSIS PROGRAM

PETRAL EXPLORATION

Knockdhu Unit #2 Well
San Juan County, Utah

Prepared for:

PETRAL EXPLORATION
P.O. Box 5083
Denver, Colorado 80217

Attn.: Mr. Bob Coskey

Prepared by:

TerraTek, Inc.
University Research Park
420 Wakara Way
Salt Lake City, Utah 84108

TR96-6177
November 1996

1 PROJECT SUMMARY

1.1 WELL SUMMARY

Company:	Petral Exploration	County:	San Juan
Well Name:	Knockdhu Unit #2	State:	Utah
Field Name:	Knockdhu Unit	Location:	Sec. 33, T37S, R25E
Drilling Fluid:	Water Base	Elevation:	

1.2 CORE SUMMARY

Diamond coring equipment and water base drilling mud were used in the Knockdhu Unit #2 well, located in San Juan County, Utah, to obtain four-inch diameter cores from the Desert Creek/Ismay formations. The intervals cored are listed below in Table 1-1.

Table 1-1. Core Interval Summary

Core Number	*Depth Interval (feet)*	*Formation*
1	5507.0 - 5567.5	Desert Creek/Ismay
2	5567.0 - 5627.8	Desert Creek/Ismay

TerraTek
University Research Park
420 Wakara Way • Salt Lake City, Utah 84108
Telephone (801) 584-2400
FAX (801) 584-2406

A representative of TerraTek, Inc. was at well-site to prepare the cores for transport to the TerraTek laboratory in Salt Lake City, Utah. The cores were wrapped in Saran film to preserve residual core fluids.

TerraTek
University Research Park
420 Wakara Way • Salt Lake City, Utah 84108
Telephone (801) 584-2400
FAX (801) 584-2406

1.3 Distribution of Final Reports

Final copies of this core analysis report were distributed as outlined below in Table 1-2.

Table 1-2. Distribution of Final Reports

Number of Copies	*Company Name*	*Recipient*
1	Petral Exploration P.O. Box 5083 Denver, Colorado 80217	Bob Coskey
1	Rose Exploration 518 17th Street, Suite 1200 Denver, Colorado 80202	John Edwards
2	Questar Energy Company 1331 17th Street, Suite 800 Denver, Colorado 80202	Greg Martin
1	McIlnay and Associates 2305 Oxford Lane Casper, Wyoming 82604	Ed McIlnay
1	Division of Oil, Gas, and Mining 3 Triad Center, Suite 350 Salt Lake City, Utah 84180-1203	
2	Bureau of Land Management 82 East Dogwood Moab, Utah 84532	

2 ROUTINE CORE ANALYSIS

2.1 INTRODUCTION

A core gamma log and routine core analysis tests were performed on core material obtained from the Knockdhu Unit #2 well, located in San Juan County, Utah. The following tests were performed on full diameter core samples: (1) fluid saturation determination using the Dean-Stark technique; (2) porosity and grain density determination using expanding helium; and (3) measurement of permeability to nitrogen gas. Full diameter samples were prepared from locations selected by wellsite Petral Exploration personnel and by TerraTek personnel in the laboratory

2.2 ANALYTICAL PROCEDURES

Upon arrival in the laboratory, cores were removed from the preservation material, laid out on a core rack, properly fitted together, and a core gamma log was recorded for down-hole log correlation. Full diameter samples were prepared using a circular diamond saw blade and fresh water as blade coolant. An initial weight measurement was performed for each sample immediately after preparation.

Fluid saturations were determined by means of the solvent distillation (Dean-Stark) extraction technique using toluene as the extracting solvent. Oil remaining in the samples following the initial extraction phase was removed in a pressurized CO_2/toluene core cleaner. Clean samples were dried in a vacuum oven at 110°C for a minimum of 24 hours prior to performing porosity and permeability tests.

Porosity values were determined by measuring grain volumes and bulk volumes. Grain volumes were measured in a helium expansion porosimeter using Boyle's law. Bulk volumes were measured by submerged weight in water using Archimedes' principle of buoyancy. Grain volume and dry weight values were utilized to determine grain density for each sample.

Single-point, uncorrected permeability to nitrogen gas was measured in a pressurized Hassler sleeve core holder. Nominal sleeve pressure of 400 psi was applied to prevent gas leakage around the outside of the sample being tested. Steady-state downstream flowrate was monitored using a calibrated orifice-equipped pressure transducer. A form of Darcy's equation was employed to calculate absolute gas permeability values. Full diameter samples were tested in two orthogonal horizontal directions and in the vertical direction.

2.3 RESULTS

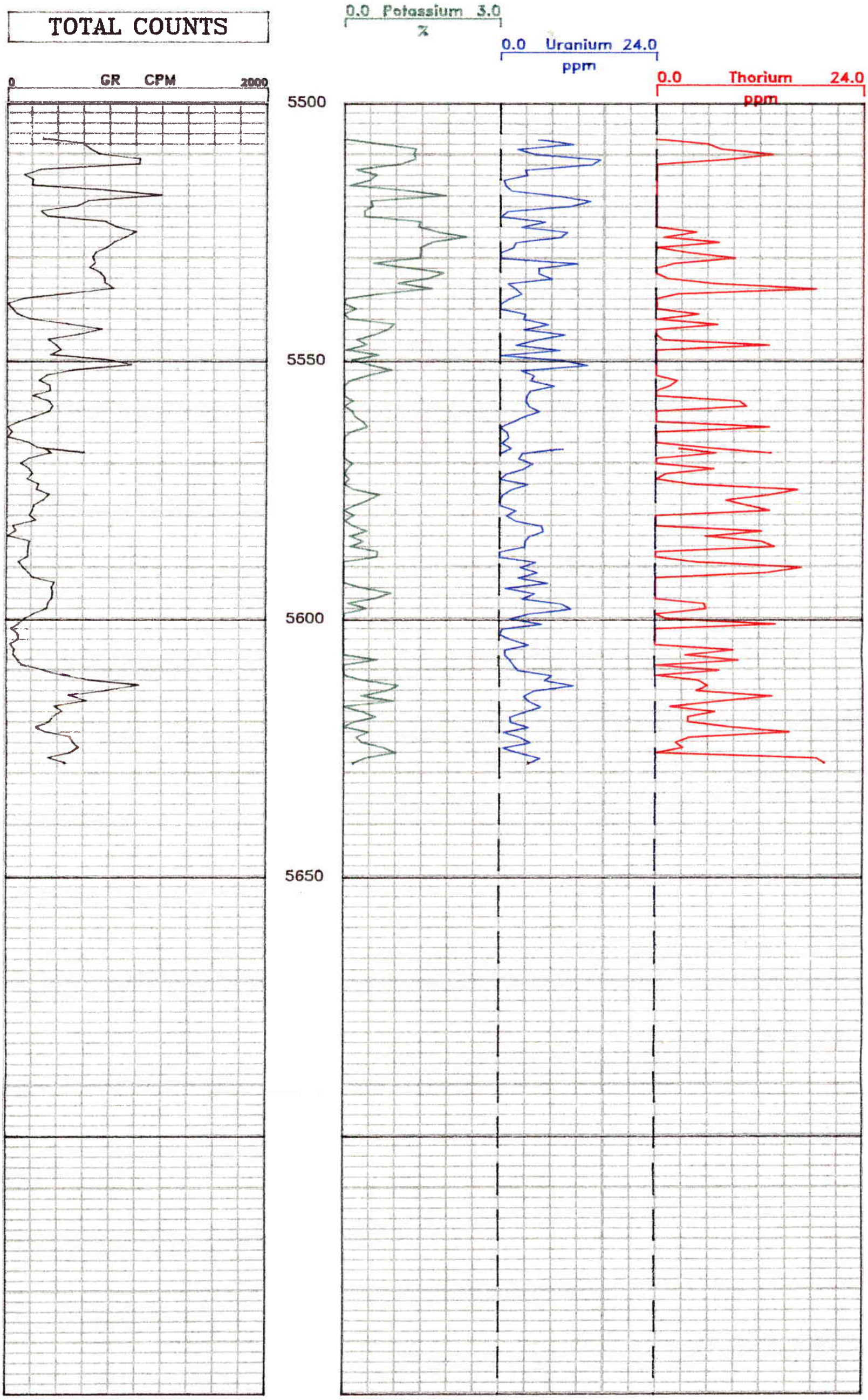
Results of the tests described above are provided in graphical and tabular forms on the following pages. Plots of the gamma ray activities of potassium, uranium, and thorium, as well as the total gamma ray activity, appear separately on the enclosed Component Gamma Log. A plot of the total gamma ray activity also appears on the enclosed Teklog™ plot, along with plots of grain density, permeability, porosity, and fluid saturations. Table 2-1 shows results of permeability, porosity, fluid saturation, and grain density tests. Also included in Table 2-1 are brief lithologic descriptions for each sample. A key to the lithologic abbreviations is provided. A statistical summary is provided in Table 2-2 and Figure 2-1 is a permeability versus porosity crossplot. Frequency distribution tables and histogram plots for permeability, porosity, oil saturation, water saturation, and grain density are provided at the end of this report.

TERRA TEK GEOSCIENCE SERVICES
360 Wakara Way, SLC Utah 84108 (801) 584-2480

PETRAL EXPLORATION
Knockdhu Unit #2 Well

October 29, 1996
TerraTek No. 6177

COMPONENT GAMMA LOG



TERRA TEK GEOSCIENCE SERVICES

360 Wakara Way, SLC Utah 84108 (801) 584-2480

PETRAL EXPLORATION
Knockdhu Unit #2 Well

TEKLOG

October 29, 1996
TerraTek No. 6177

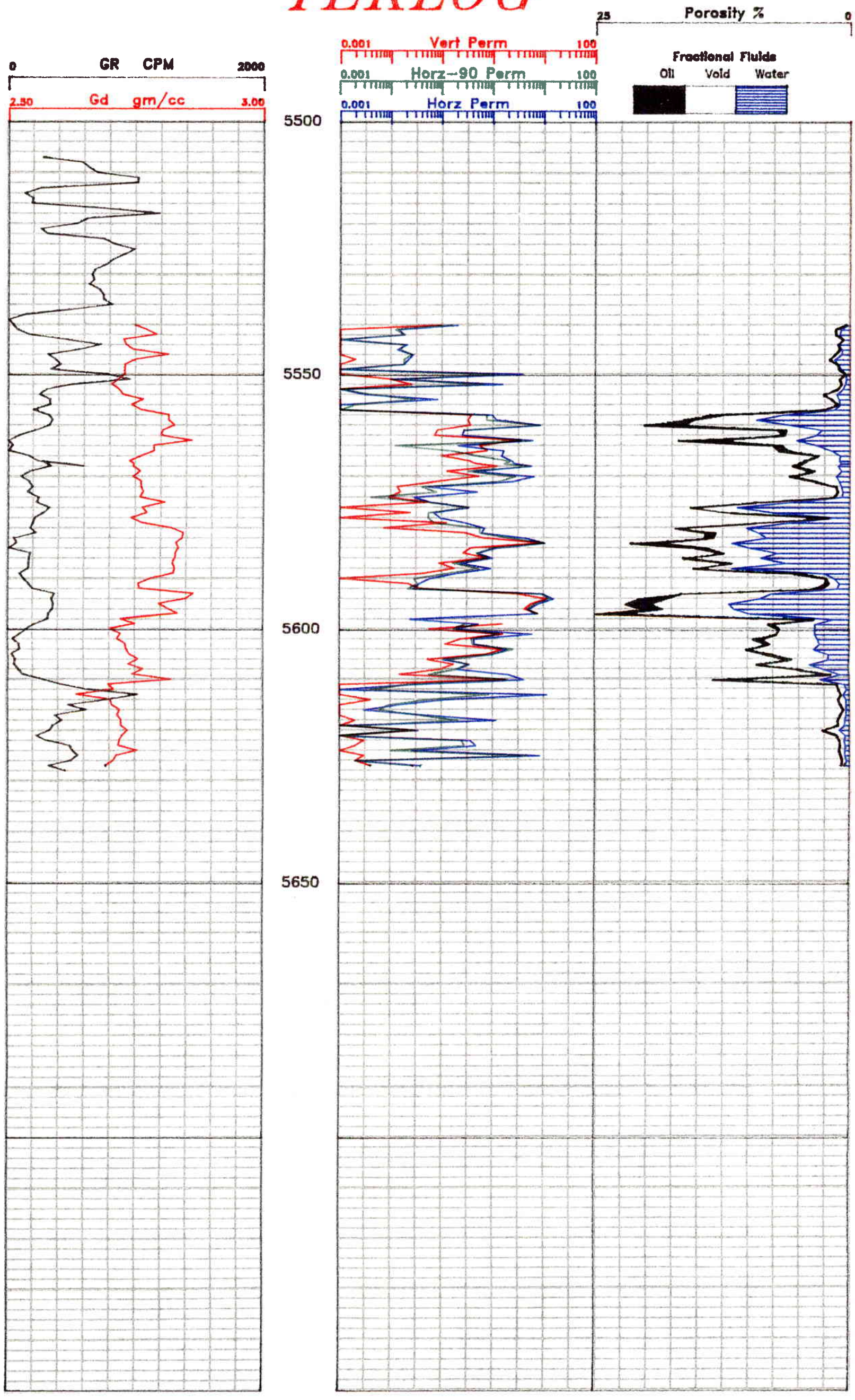


Table 2-1. Full Diameter Dean-Stark Analysis Results

Sample Number	Depth (feet)	Permeability			Porosity (%)	Saturation		Grain Density (g/cm³)	Lithology
		Kh_{max} (md)	$Kh_{90°}$ (md)	Kv (md)		Oil (%)	Water (%)		
1	5540.0 - 5541.0	v 0.20	v 0.16	v 0.10	0.4	0.0	65.5	2.75	Ls,gy/tan,vf-fxl,anhy nod
2	5541.0 - 5542.0	0.01	0.01	<0.01	1.4	0.0	64.6	2.77	Ls,ltgy/tan,vfxl,anhy,styl,mas
3	5542.0 - 5543.0	0.02	0.02	<0.01	1.4	0.0	73.1	2.79	Ls,ltgy/tan,vf-fxl,anhy nod
4	5543.0 - 5544.0	<0.01	<0.01	<0.01	0.7	0.0	99.7	2.73	Ls,ltgy,fxl,mas,anhy
5	5544.0 - 5545.0	0.02	0.02	<0.01	1.2	0.0	100.0	2.73	Ls,ltgy,fxl,mas,anhy
6	5545.0 - 5546.0	0.02	0.01	<0.01	1.0	0.0	79.4	2.74	Ls,gy/tan,fxl,anhy
7	5546.0 - 5547.0	0.03	0.03	<0.01	1.5	0.0	57.1	2.81	Ls,gy/tan,fxl,ool,anhy
8	5547.0 - 5548.0	0.02	0.02	<0.01	2.0	0.0	75.3	2.75	Ls,gy/tan,fxl,ool,anhy
9	5548.0 - 5549.0	0.02	0.02	<0.01	1.2	0.0	98.3	2.73	Ls,ltgy/tan,fxl,mas
10	5549.0 - 5550.0	<0.01	<0.01	<0.01	1.1	0.0	77.9	2.73	Ls,ltgy/tan,fxl,mas
11	5550.0 - 5551.0	+ 3.92	+ 1.11	<0.01	0.5	0.0	87.7	2.73	Ls,mgy/tan,fxl,styl,pof
12	5551.0 - 5552.0	0.01	0.01	0.01	1.0	0.0	37.9	2.72	Ls,mgy/tan,fxl,fos,styl
13	5552.0 - 5553.0	v 1.56	v 0.65	v 0.03	0.8	0.0	57.9	2.70	Ls,gy/tan,f-mxl,fos,frac
14	5553.0 - 5554.0	<0.01	<0.01	<0.01	1.2	0.0	60.0	2.72	Ls,gy/tan,f-mxl,fos,brec
15	5554.0 - 5555.0	<0.01	<0.01	<0.01	2.6	0.0	50.6	2.72	Ls,gy/tan,fxl,fos,brec
16	5555.0 - 5556.0	+ 0.08	+ 0.03	<0.01	1.8	0.0	60.4	2.76	Ls,gy/tan,vf-fxl,styl,fos,anhy
17	5556.0 - 5557.0	<0.01	<0.01	<0.01	1.2	0.0	80.9	2.74	Ls,gy/tan,f-mxl,fos,anhy
18	5557.0 - 5558.0	<0.01	<0.01	<0.01	2.6	0.0	60.5	2.76	Ls,gy/tan,f-mxl,fos,anhy
21	5560.0 - 5561.0	8.42	8.24	0.36	20.2	18.0	29.0	2.83	Dol,brn/gy,fxl,intxl,ppvgs,anhy
22	5561.0 - 5562.0	0.27	0.27	0.08	7.1	12.2	38.8	2.80	Ls,gy,vfxl,brec,styl,anhy,dol
23	5562.0 - 5563.0	0.25	<0.01	0.07	6.6	2.1	51.8	2.80	Ls,gy,vfxl,brec,ppvgs,anhy
24	5563.0 - 5564.0	6.09	5.51	3.47	16.9	20.0	31.4	2.86	Dol,brn,vf-fxl,ppvgs
25	5564.0 - 5565.0	v 0.20	v 0.01	v 0.54	7.6	11.2	43.4	2.78	Ls,ltgy,fxl,ppvgs,brec,fos,pof
26	5565.0 - 5566.0	+ 1.65	+ 0.16	0.77	7.0	13.5	25.9	2.79	Ls,ltgy,vf-fxl,ppvgs,brec,intxl

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420 Wakara Way • Salt Lake City, Utah 84108
Telephone (801) 584-2400
FAX (801) 584-2406

Sample Number	Depth (feet)	Permeability			Porosity	Saturation		Grain Density	Lithology
		Kh_{max} (md)	$Kh_{90°}$ (md)	Kv (md)	(%)	Oil (%)	Water (%)	(g/cm^3)	
27	5566.0 - 5567.0	1.46	0.51	0.10	3.2	4.1	29.6	2.76	Ls,gy,vf-fxl,ppvgs,brec
28	5567.0 - 5567.5	2.38	2.18	0.35	4.5	5.8	23.7	2.74	Ls,gy,vf-fxl,ppvgs,brec,fos,intxl
29	5567.5 - 5568.0	2.70	1.65	0.45	5.0	7.8	17.3	2.75	Ls,gy,vf-fxl,ppvgs,pof,intxl,anhy,brec
30	5568.0 - 5569.0	v 5.65	v 5.30	v 1.18	5.7	6.6	20.7	2.74	Ls,gy,vf-fxl,ppvgs,pof,brec,intxl,anhy
31	5569.0 - 5570.0	0.40	0.33	0.12	3.8	7.6	22.5	2.76	Ls,gy/brn,vf-mxl,ppvgs,styl,intxl,brec
32	5570.0 - 5571.0	6.48	2.80	0.52	3.0	6.1	22.8	2.74	Ls,gy/brn,vf-fxl,ppvgs,styl,brec,anhy
33	5571.0 - 5572.0	v 2.42	v 1.31	v 0.08	3.5	3.0	30.3	2.76	Ls,gy/brn,fxl,intxl,styl,pof,anhy,ppvgs
34	5572.0 - 5573.0	0.05	0.04	0.01	1.3	0.0	61.5	2.76	Ls,gy/brn,vf-fxl,styl,brec,clst,anhy
35	5573.0 - 5574.0	0.50	0.08	0.02	1.2	0.0	59.9	2.76	Ls,gy/brn,vf-fxl,styl,brec,clst,anhy
36	5574.0 - 5575.0	0.03	<0.01	<0.01	1.5	0.0	52.6	2.76	Ls,gy,vf-fxl,brec,clst,anhy
37	5575.0 - 5576.0	0.06	0.06	0.05	9.2	0.0	62.7	2.81	Dol,tan,vfxl,lam,anhy,intxl
38	5576.0 - 5577.0	0.34	0.33	<0.01	15.6	0.0	71.0	2.76	Dol,tan,vfxl,styl,anhy
39	5577.0 - 5578.0	0.07	0.06	0.02	11.7	0.0	64.9	2.77	Dol,tan,micxl,styl,calc,anhy
40	5578.0 - 5579.0	0.09	0.05	<0.01	2.0	0.0	77.4	2.74	Ls,gy,vfxl,styl,anhy
41	5579.0 - 5580.0	0.30	0.07	0.12	9.3	0.0	65.0	2.76	Ls,tan,vfxl,styl,lam,dol
42	5580.0 - 5581.0	+ 0.70	+ 0.56	<0.01	17.1	0.0	59.3	2.82	Dol,brn,micxl,lam,shy
43	5581.0 - 5582.0	0.61	0.57	0.29	14.2	7.1	63.5	2.84	Dol,brn,mic-vfxl,styl,anhy
44	5582.0 - 5583.0	4.51	2.29	0.66	14.2	6.1	57.5	2.84	Dol,brn,vfxl,ppvgs,styl,anhy
45	5583.0 - 5584.0	10.67	10.41	10.01	21.5	12.9	53.9	2.83	Dol,brn,micxl,ppvgs,intxl,anhy
46	5584.0 - 5585.0	1.13	1.05	0.37	15.2	7.7	64.6	2.83	Dol,tan,micxl,lam,anhy
47	5585.0 - 5586.0	0.50	0.49	0.26	12.4	0.0	58.1	2.83	Dol,brn,vfxl,fos,styl,anhy
48	5586.0 - 5587.0	0.99	0.84	0.78	16.4	0.9	53.7	2.83	Dol,brn,vfxl,fos,styl,anhy
49	5587.0 - 5588.0	0.23	0.17	0.09	11.6	0.0	53.8	2.82	Dol,brn,vf-fxl,styl,anhy
50	5588.0 - 5589.0	0.93	0.53	0.18	15.3	0.0	75.7	2.83	Dol,tan,vfxl,styl,lam,anhy
51	5589.0 - 5590.0	0.18	0.13	0.04	5.4	15.6	45.9	2.82	Dol,gy/tan,vfxl,intprt,lam,slty,anhy
52	5590.0 - 5591.0	0.06	0.03	<0.01	2.3	0.0	64.0	2.78	Ls,gy/tan,vfxl,aff,intxl,dol,anhy

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Telephone (801) 584-2400
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Sample Number	Depth (feet)	Permeability			Porosity	Saturation		Grain Density	Lithology
		Kh_{max} (md)	$Kh_{90°}$ (md)	Kv (md)	(%)	Oil (%)	Water (%)	(g/cm^3)	
53	5591.0 - 5592.0	0.04	0.03	0.02	2.4	16.7	42.1	2.76	Ls,gy/tan,vfxl,styl,clst,dol,aff
54	5592.0 - 5593.0	0.03	0.02	0.04	3.4	21.1	34.3	2.76	Ls,gy/tan,vf-fxl,styl,aff,dol
55	5593.0 - 5594.0	9.65	9.39	3.01	16.5	0.0	46.9	2.86	Dol,brn,fxl,ppvgs,styl,anhy
56	5594.0 - 5595.0	15.82	13.59	11.28	20.8	13.1	43.1	2.85	Dol,brn,fxl,ppvgs,anhy
57	5595.0 - 5596.0	7.74	6.84	5.63	22.0	11.0	54.0	2.80	Dol,brn,fxl,anhy,slty,intxl
58	5596.0 - 5597.0	4.96	4.93	4.13	20.4	9.9	55.6	2.81	Dol,brn,fxl,anhy,intxl
59	5597.0 - 5598.0	7.80	6.71	7.58	24.9	9.3	39.3	2.83	Dol,brn,fxl,ppvgs,anhy
60@	5598.0 - 5599.0	0.02	NA *	NA *	3.5	0.0	46.8	2.72	Ls,brn,vfxl,ppvgs,slty,anhy
61	5599.0 - 5600.0	v 0.54	v 0.28	v 1.53	8.0	6.5	42.8	2.75	Ls,tan,vfxl,styl,dol
62	5600.0 - 5601.0	0.19	0.18	0.06	6.9	0.0	49.6	2.70	Ls,tan,mic-vfxl,styl,intprt
63	5601.0 - 5602.0	v 6.12	v 1.39	v 1.61	7.2	0.0	48.0	2.72	Ls,tan,vfxl,styl
64	5602.0 - 5603.0	0.44	0.39	0.24	9.5	8.9	33.3	2.71	Ls,tan,vfxl,ppvgs
65	5603.0 - 5604.0	0.44	0.42	0.12	8.1	3.2	36.9	2.73	Ls,tan,vfxl,ppvgs,intxl
66	5604.0 - 5605.0	2.59	1.95	1.52	10.1	0.0	35.2	2.73	Ls,tan,vfxl,ppvgs,fos,anhy
67	5605.0 - 5606.0	1.01	1.01	0.77	8.2	6.7	24.9	2.74	Ls,gy/tan,vfxl,ppvgs,fos,anhy
68	5606.0 - 5607.0	0.13	0.11	0.05	6.0	6.9	34.9	2.75	Ls,gy/tan,vfxl,styl,intxl
69	5607.0 - 5608.0	0.36	0.36	0.17	9.1	0.0	42.9	2.74	Ls,tan,vfxl,ppvgs
70	5608.0 - 5609.0	0.20	0.20	0.10	5.0	0.0	47.0	2.76	Ls,brn,vfxl,intxl,anhy
71	5609.0 - 5610.0	+ 2.10	+ 0.06	0.02	1.8	0.0	50.0	2.74	Ls,gy/brn,vfxl,intxl
72	5610.0 - 5611.0	4.18	2.06	1.79	13.4	10.7	21.4	2.82	Dol,brn,fxl,ppvgs,anhy
73	5611.0 - 5612.0	0.03	0.02	<0.01	1.2	0.0	38.8	2.70	Ls,dkgy,vf-fxl,styl,ool,biot,fos
74	5612.0 - 5613.0	<0.01	<0.01	<0.01	1.1	0.0	24.7	2.71	Ls,gy,vf-fxl,fos,ool,biot,clst
75	5613.0 - 5614.0	+ 11.81	+ 0.86	<0.01	0.8	0.0	74.2	2.63	Ls,dkgy,vfxl,fos,biot,lam,shy,pof
76	5614.0 - 5615.0	+ 0.11	+ 0.06	<0.01	1.1	0.0	31.4	2.70	Ls,mgy,vfxl,fos,biot,frac
77	5615.0 - 5616.0	0.01	<0.01	<0.01	0.9	0.0	37.6	2.70	Ls,gy,vf-fxl,fos,biot,lam,styl,ool
78	5616.0 - 5617.0	<0.01	<0.01	<0.01	0.6	0.0	57.7	2.72	Ls,gy,vfxl,fos,styl,lam,ool

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Sample Number	Depth (feet)	Permeability			Porosity	Saturation		Grain Density	Lithology
		Kh_{max} (md)	$Kh_{90°}$ (md)	Kv (md)	(%)	Oil (%)	Water (%)	(g/cm^3)	
79	5617.0 - 5618.0	+ 0.06	+ 0.04	<0.01	0.9	0.0	37.3	2.71	Ls,gy,vfxl,fos,brec,lam
80	5618.0 - 5619.0	+ 1.18	+ 0.21	<0.01	1.2	0.0	40.4	2.72	Ls,gy,vfxl,fos,lam,of
81	5619.0 - 5620.0	<0.01	<0.01	<0.01	1.1	0.0	45.2	2.72	Ls,gy,vfxl,fos
82	5620.0 - 5621.0	+ 0.04	+ 0.02	0.03	2.6	0.0	38.3	2.73	Ls,gy/tan,vf-fxl,lam,fos
83	5621.0 - 5622.0	<0.01	<0.01	<0.01	1.3	0.0	31.6	2.72	Ls,gy,fxl,lam,fos
84	5622.0 - 5623.0	+ 0.37	+ 0.25	<0.01	1.0	0.0	52.6	2.72	Ls,gy,fxl,lam,dff,intxl
85	5623.0 - 5624.0	+ 0.47	+ 0.29	<0.01	0.9	0.0	44.3	2.72	Ls,gy,fxl,styl,lam,fos
86	5624.0 - 5625.0	+ 0.03	+ 0.01	<0.01	1.0	0.0	45.2	2.75	Ls,gy,vf-fxl,lam,fos,biot
87	5625.0 - 5626.0	+ 8.44	+ 4.92	<0.01	0.9	0.0	53.2	2.71	Ls,mgy,vfxl,fos,lam,shy,of
88	5626.0 - 5627.0	<0.01	<0.01	<0.01	0.7	0.0	36.9	2.71	Ls,mgy,vfxl,fos,biot,ool,shy
89	5627.0 - 5628.0	+ 0.04	+ 0.03	<0.01	0.8	0.0	58.5	2.69	Ls,mgy,vfxl,fos,biot,ool,shy

@ - Plug analysis
+ - Horizontal fracture affecting permeability
v - Vertical fracture affecting permeability
* - N $Kh_{90°}$ or Kv measured

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Description Scheme for Carbonate Sedimentary Rocks:
Rock Type, Color, Grain Size/Crystal Size, Porosity Type, Accessories

Description Scheme for Clastic Sedimentary Rocks:
Rock Type, Color, Grain Size, Cement, Structures and Accessories

Key to Abbreviations:

aff	- anhydrite filled fracture	gff	- gouge filled fracture	ptg	- parting(s)
alt	- altered	glauc	- glauconitic	purp	- purple
anhy	- anhydrite(ic)	gn	- green	pyr	- pyrite(ic)
arg	- argillaceous	gr	- grain(ed)	qff	- quartz filled fracture
bdd	- bedded	grnl	- granule	qtz	- quartz
bent	- bentonite	gy	- gray	red	- red
bf	- buff	gyp	- gypsum(iferous)	sa	- salty
biot	- bioturbated	hem	- hematite(ic)	sdy	- sandy
bit	- bitumen	if	- incipient fracture	sh	- shale
bl	- blue(ish)	incl	- inclusion	shy	- shaley
blk	- black	intprt	- interparticle	sid	- siderite
bnd	- banded	intrprt	- intraparticle	sil	- silica(eous)
brec	- breccia(ted)	intxl	- intercrystalline	sl/	- slightly
brn	- brown	lam	- laminated	sltst	- siltstone
bur	- burrowed	lav	- lavender	slty	- silty
c	- coarse	lig	- lignite(ic)	ss	- sandstone
calc	- calcite(areous)	ls	- limestone	stn	- stain(ed)(ing)
carb	- carbonaceous	lt	- light	str	- streak
cff	- calcite filled fracture	m	- medium	styl	- stylolite
cgl	- conglomerate	mar	- maroon	suc	- sucrosic
chky	- chalky	mas	- massive	tan	- tan
chlor	- chlorite	mdy	- muddy	v/	- very
cht	- chert	mic	- micro	vc	- very coarse
chty	- cherty	mica	- micaceous	vf	- very fine
clst	- clast	mol	- moldic	vgy	- vuggy
cly	- clay(ey)	ms	- mudstone	wh	- white
clyst	- claystone	mtx	- matrix	wthrd	- weathered
cob	- cobble	nod	- nodule(s)	yel	- yellow
dism	- disseminated	o	- oil	xbdd	- cross-bedded
dk	- dark	of	- open fracture	xl	- crystalline
dff	- dolomite filled fracture	ool	- oolitic		
		org	- organic		
dol	- dolomite(ic)	orng	- orange		
f	- fine	pbl	- pebble		
fen	- fenestral	pel	- peloids		
fis	- fissile	pff	- pyrite filled fracture		
fos	- fossil(iferous)	pis	- pisolitic		
frac	- fracture	pk	- pink		
fri	- friable	pof	- partially open fracture		
		ppvgs	- pinpoint vugs		

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Table 2-2. Core Analysis Data Summary - Full Diameter Dean-Stark Analysis

Horizontal Permeability (Kh_{max}):

Number of Samples	89
Minimum Permeability	0.001 md
Maximum Permeability	15.817 md
Arithmetic Average	1.745 md
Geometric Average	0.202 md
Median	0.270 md
Standard Deviation	±3.132 md

Horizontal Permeability ($K_{90°}$):

Number of Samples	88
Minimum Permeability	0.001 md
Maximum Permeability	13.585 md
Arithmetic Average	1.208 md
Geometric Average	0.117 md
Median	0.164 md
Standard Deviation	±2.539 md

Vertical Permeability (Kv):

Number of Samples	88
Minimum Permeability	0.001 md
Maximum Permeability	11.276 md
Arithmetic Average	0.700 md
Geometric Average	0.030 md
Median	0.035 md
Standard Deviation	±1.940 md

Porosity:

Number of Samples	89
Minimum Porosity	0.4 %
Maximum Porosity	24.9 %
Arithmetic Average	6.4 %
Median	3.4 %
Standard Deviation	±6.5 %

Oil Saturation:

Number of Samples	89
Minimum Oil Saturation	0.0 %
Maximum Oil Saturation	21.1 %
Arithmetic Average	3.5 %
Median	0.0 %
Standard Deviation	±5.4 %

Water Saturation:

Number of Samples	89
Minimum Water Saturation	17.3 %
Maximum Water Saturation	100.0 %
Arithmetic Average	50.8 %
Median	50.0 %
Standard Deviation	±18.3 %

Grain Density:

Number of Samples	89
Minimum Grain Density	2.63 g/cm^3
Maximum Grain Density	2.86 g/cm^3
Arithmetic Average	2.76 g/cm^3
Median	2.75 g/cm^3
Standard Deviation	±0.05 g/cm^3

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Horizontal Permeability
vs
Porosity

Petral Exploration
#2 Knockdhu Unit Well
Desert Creek/Ismay Formations
San Juan County, Utah
29-Oct-96

Depth Interval: 5507 to 5628 feet		
TerraTek File No.: 6177		
Porosity (ϕ), %		
Minimum	Maximum	Average
0.388	24.875	6.444
Permeability ($Kh_{90°}$), md		
Minimum	Maximum	Geo. Average
0.001	13.585	0.117
Equation of the Line		
log Kh90° = 0.1177 × ø - 1.6888		
Correlation Coefficient: 0.66387		

Figure 2-1. Horizontal Permeability versus Porosity Crossplot

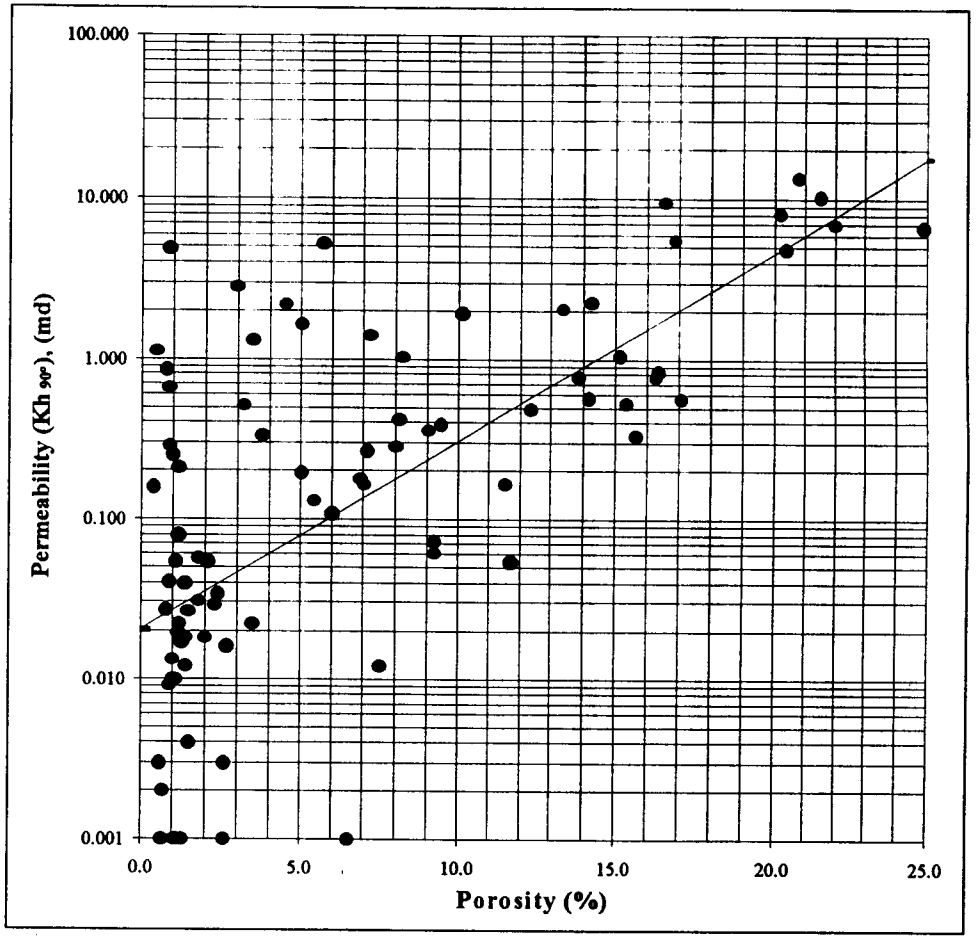

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Table 2-3. Horizontal Permeability Frequency Distribution

(Includes Kh_{max} and $Kh_{90°}$ Permeability Measurements)

Permeability (md)	*Frequency*	*Cumulative Percent*
0.002	18	10.2%
0.004	5	13.0%
0.006	1	13.6%
0.008	0	13.6%
0.01	3	15.3%
0.02	14	23.2%
0.04	19	33.9%
0.06	8	38.4%
0.08	5	41.2%
0.1	2	42.4%
0.2	11	48.6%
0.4	19	59.3%
0.6	13	66.7%
0.8	5	69.5%
1	5	72.3%
2	14	80.2%
4	10	85.9%
6	8	90.4%
8	7	94.4%
10	5	97.2%
More	5	100.0%
Number of Tests	177	

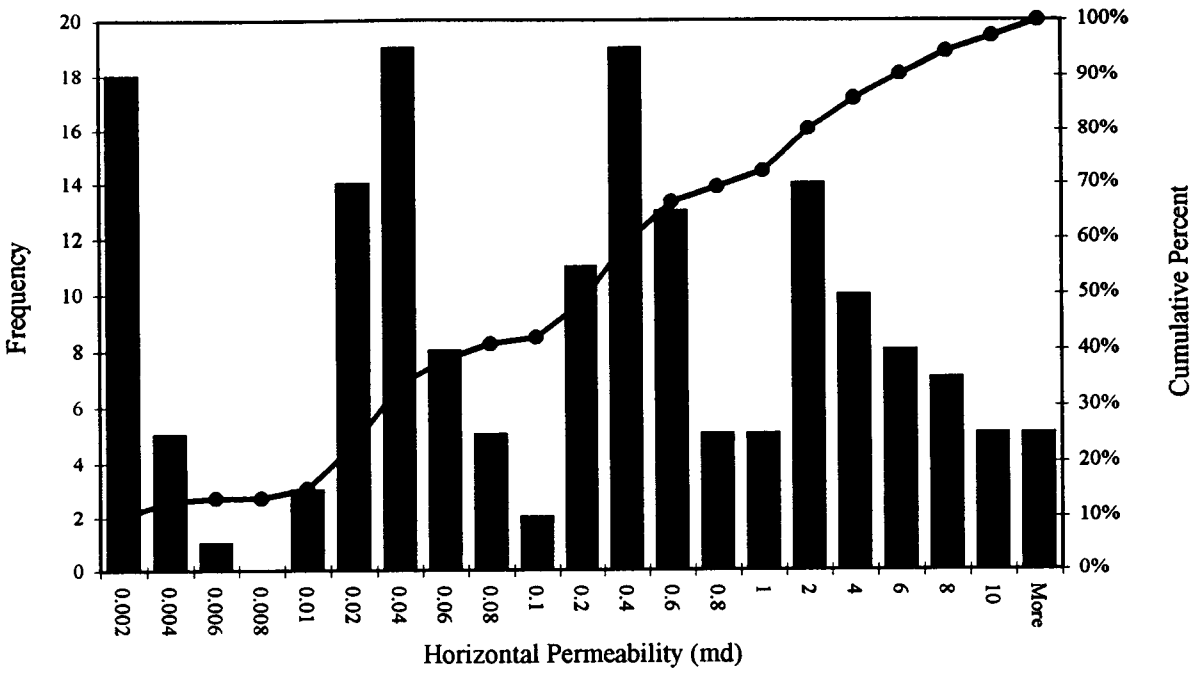

Figure 2-2. Permeability Histogram

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Table 2-4. Porosity Frequency Distribution

Porosity (%)	*Frequency*	*Cumulative Percent*
0.5	2	2.2%
1.0	11	14.6%
2.0	22	39.3%
3.0	8	48.3%
4.0	5	53.9%
5.0	1	55.1%
6.0	4	59.6%
7.0	3	62.9%
8.0	5	68.5%
9.0	2	70.8%
10.0	4	75.3%
11.0	1	76.4%
12.0	2	78.7%
13.0	1	79.8%
14.0	2	82.0%
15.0	2	84.3%
16.0	3	87.6%
17.0	4	92.1%
18.0	1	93.3%
19.0	0	93.3%
20.0	0	93.3%
More	6	100.0%
Number of Samples	89	

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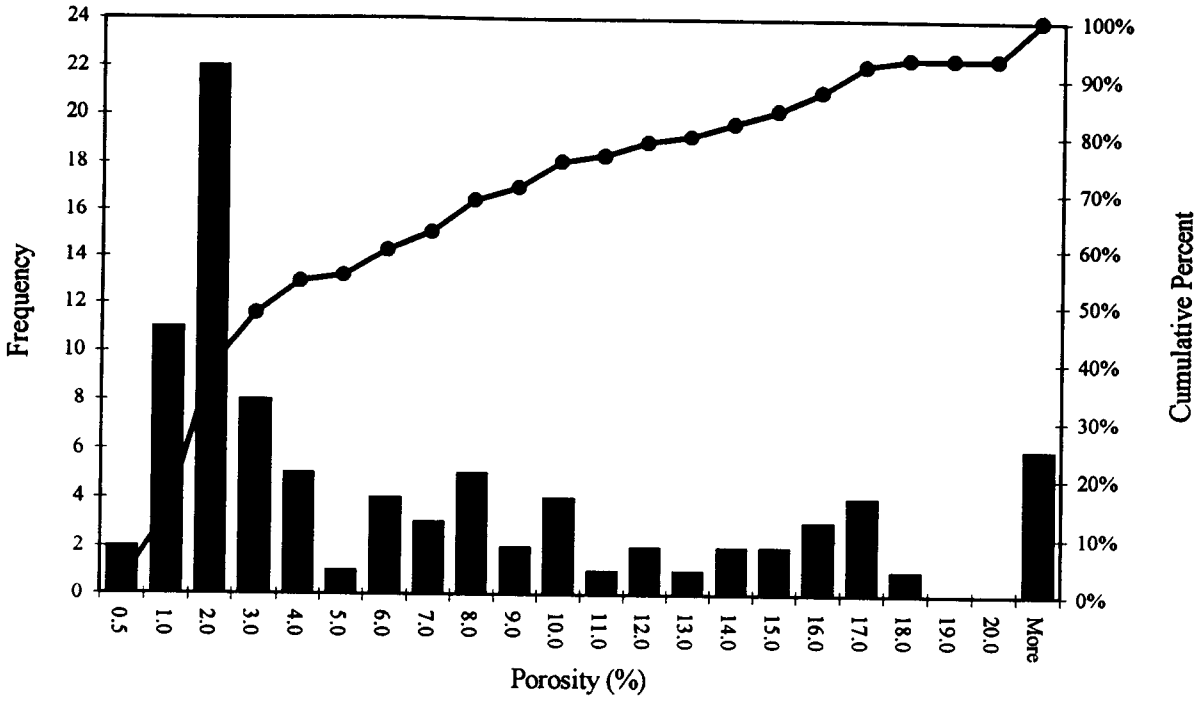

Figure 2-3. Porosity Histogram

Table 2-5. Oil Saturation Frequency Distribution

Oil Saturation (%)	*Frequency*	*Cumulative Percent*
0	56	62.9%
2	1	64.0%
4	3	67.4%
6	2	69.7%
8	11	82.0%
10	4	86.5%
12	3	89.9%
14	4	94.4%
16	1	95.5%
18	1	96.6%
20	1	97.8%
More	2	100.0%
Number of Samples	89	

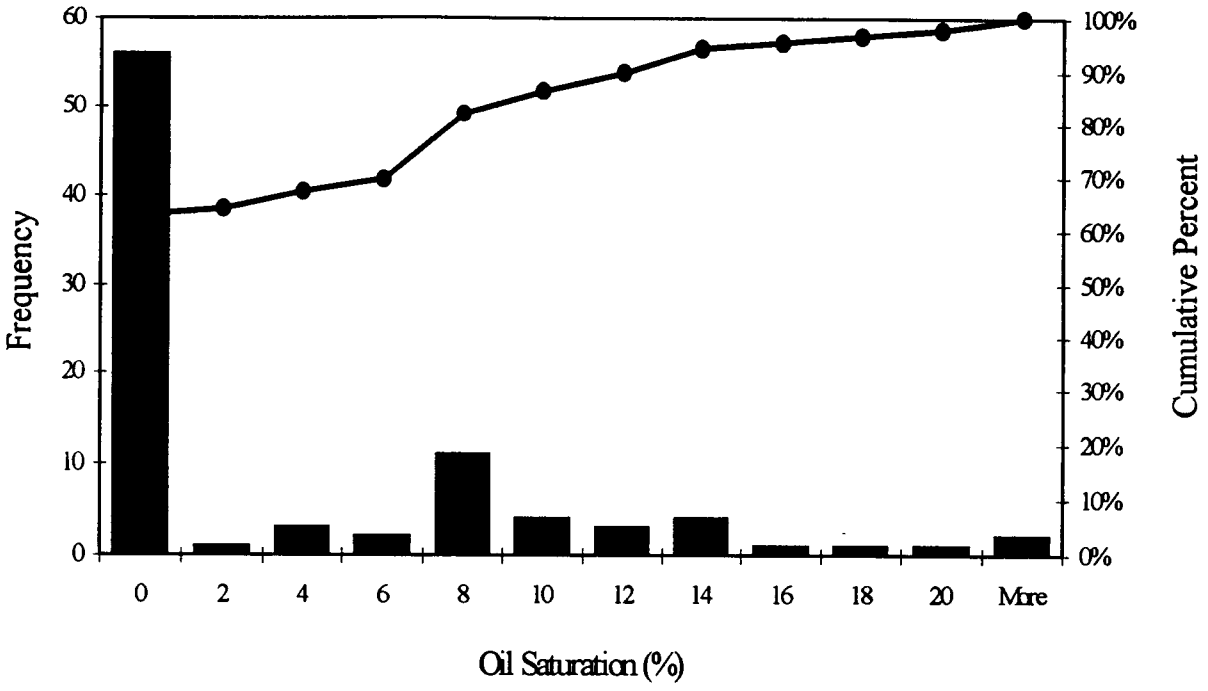

Figure 2-4. Oil Saturation Histogram

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Table 2-6. Water Saturation Frequency Distribution

Water Saturation (%)	*Frequency*	*Cumulative Percent*
20	1	1.1%
30	10	12.4%
40	17	31.5%
45	7	39.3%
50	10	50.6%
55	9	60.7%
60	11	73.0%
65	10	84.3%
70	1	85.4%
75	3	88.8%
80	5	94.4%
85	1	95.5%
90	1	96.6%
95	0	96.6%
More	3	100.0%
Number of Samples	89	

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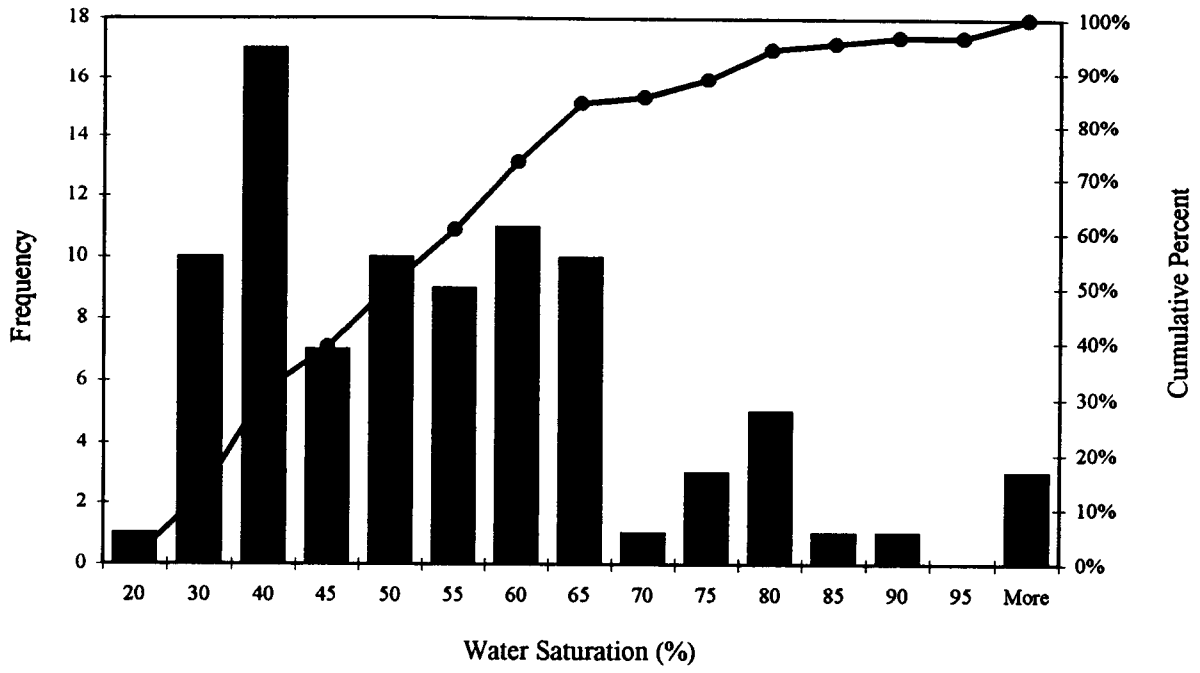

Figure 2-5. Water Saturation Histogram

Table 2-7. Grain Density Frequency Distribution

Grain Density (g/cm^3)	*Frequency*	*Cumulative Percent*
2.70	4	4.5%
2.72	14	20.2%
2.74	17	39.3%
2.76	19	60.7%
2.77	6	67.4%
2.78	2	69.7%
2.79	3	73.0%
2.80	2	75.3%
2.81	2	77.5%
2.82	6	84.3%
2.83	7	92.1%
2.84	3	95.5%
2.85	2	97.8%
More	2	100.0%
Number of Samples	89	

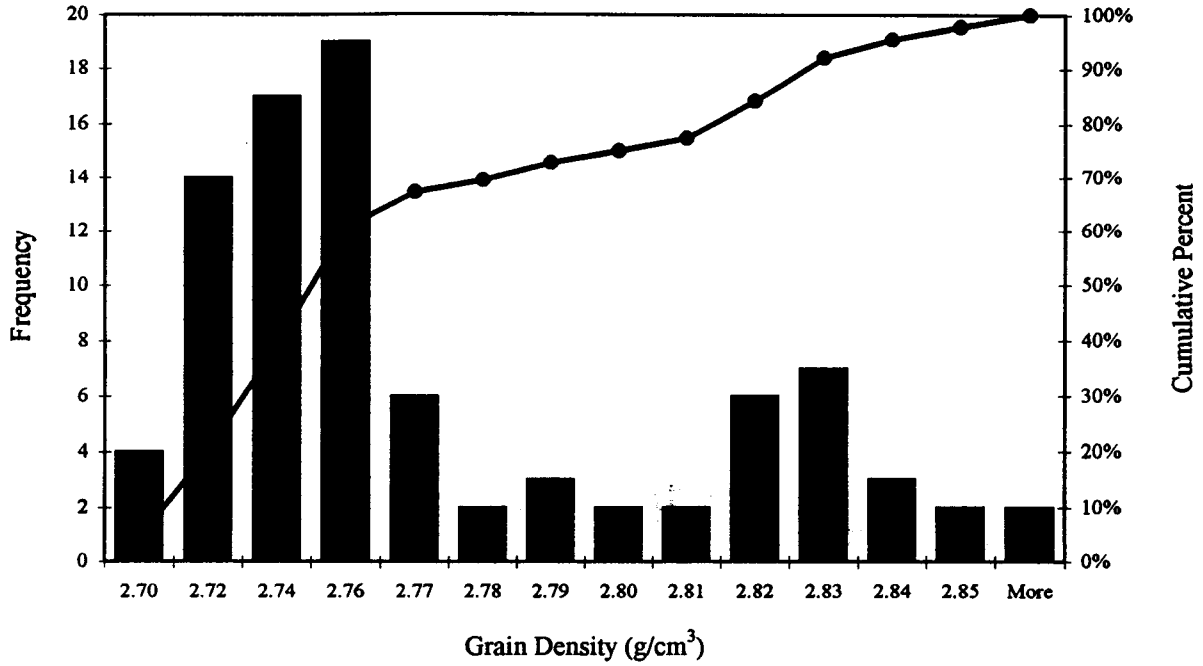

Figure 2-6. Grain Density Histogram

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facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: November 8, 1996
pages: 3 , including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1718

11-2-96

Shut in wellhead pressure 30 psig. Bled same off. Rigged up pump and lines. Waited on pipe rams for BOP (sent wrong ones). Installed 2 3/8" tubing pipe rams. Unloaded tubing and tallied same. Installed drilling spool and mud cross on BOP. Made up bit and bit sub on lst jt. tubing. Set #2 mud pump. Drained pump and lines. CIW & SDFN

11-3-96

TD: 5871'
Bit: 1, 7 7/8" Reed HP51, In @ 0, Jets 13-14-15
Mud: Wt. 10, Vis 44, WL 9, FC 2/32, Ph 10, PV 19, YP 13, Gels 3/11, PF/MF .1/.4, Solids 12, Sand 1/4, Calcium 1000, Chlorides 15,500
BHA: Bit, bit sub, XO, 2 3/8" tubing
Pump 850 psi, GPM 3, BPM 48, AVDP 61
Pump:#1 4 x 5, 200 SPM
Operations: Picked up and rabbitted 2 3/8" tubing. TIH to 1670'. Circulated and conditioned mud. Ran into 2573' w/tubing. Hit bridge. Picked up swivel, washed and reamed to 2765'. Tight hole @ 2700'. Circulated and conditioned mud and hole. Pulled tubing and bit into casing @ 1600'. SDFN @ 5:30 PM and drained up equipment.

Unloaded 139 Jts. 5 1/2", 15.5#/ft., K-55 Csg. Sand blasted 23 Jts. (1082'), cleaned threads, drifted and measured casing (143 Jts. on location). Transferred 4 Jts. 5 1/2" casing from Knockando Unit #2.

11-4-96

Bit: 1, 7 7/8" Reed HP51, In @ 0 - out @ 3416', Jets. 13-14-15 Reaming
Mud: Wt. 9.9, Vis 41, WL 10, FC 2/32, Ph 10, PV 19, YP 11, Gels 4/9, PF/MF .03/.3, Solids 11.8, Sand 1/4, Calcium 700, Chlorides 17,000
BHA: Bit, bit sub, XO, 2 3/8" tubing
WOB - 2/4,000#, RPM 50, Pump 850 psi, GPM 146, AVDP 61
Pump:#1 4 x 5, 800 SPM
#2 3 x 5

Operations: Started operations @ 7 AM. TIH w/tubing to 3236'. Circulated and conditioned mud. Reamed and washed down to 3416'. Hit bridge @ 3416'. Unable to work through same. TOH with tubing and bit. Will pick up 4 3/4" DC Monday AM and continue to clean out to TD. SDFN @ 3:30 PM. Rained all day.

11-5-96

PBD: 3,601'
Bit: 1, 7 7/8" Reed HP51, In @ 0 - reamed to 3,601', Jets. 13-14-15 Reaming
Mud: Wt. 9.6, Vis 45, WL 9, FC 2/32, Ph 10, PV 21, YP 13, Gels 4/11, PF/MF .1/.4, Solids 5, Sand 1/4, Calcium 600, Chlorides 17,000
BHA: Bit, bit sub, 8.4 3/4 DC, XO, 2 3/8" tubing
WOB - 6-8, RPM 50, Pump 1200 psi, GPM 146, AVDP 61/90
Pump:#1 4 x 5, 200 SPM
#2 3 x 5
Operations: Started operations @ 7 AM. Unloaded 8-4 3/4" DC, and handling equipment. Made up bit, bit subs & drill collar. Trip in hole. Hit bridge @ 2,285'. Washed and reamed to 3,601'. Water flows have badly water cut mud. Building Vis. and mud weight. Tripped back into casing and SDFN @ 5:30 P.M.

11-6-96

PBD: 5,483'
Bit: 1, 7 7/8" Reed HP51, In @ 0.Jets 12-13-14 reaming.
Mud: Wt. 9.9, Vis 52, WL 9, FC 2/32, Ph 9, PV 22, YP 18, Gels 5/10, PF/MF .05/.4, Solids 11.8, Sand 1/4, Calcium 280, Chlorides 16,500
BHA: Bit, bit sub, 8.4 3/4 DC, XO, 2 3/8" tubing
WOB - 6-8000, RPM 50, Pump 1200 psi, GPM 146, AVDP 61/90
Pump:#1 4 x 5, 200 SPM
#2 4 x 4

11-6-96 continued
Operations: Started operations @ 7 AM. Trip in hole to 3,601 broke circulation. Washed & reamed to 5,483'. Tight spots all the way to 5,483'. Hard bridge at 5,483'. Circulated & mixed mud to condition hole. Trip up into casing SDFN.

11-7-96
PBD: 5,871'
Bit: 1, 7 7/8" Reed HP51, In @ 0.Jets 12-13-14 reaming.
Mud: Wt.10.1, Vis 45, WL 7, FC 2/32, Ph 10.5, PV 20, YP 11, Gels 4/8, PF/MF .1/.6 , Solids 13.3, Sand 1/4, Calcium 240, Chlorides 17,000
BHA: Bit, bit sub, 8.4 3/4 DC, 247.7' XO, tubing
WOB - 4-6000 , RPM 50, Pump 1250 psi,
Pump:#1 4 x 5, 200 SPM
#2 3 x 4
SLM: Talley 5,871.70KB
Operations: Started up operations @ 7 AM. Trip in hole & hit bridge @ 5,483'. Washed & reamed to 5,871 71 T.D. Picked - up 5' and circulated & conditioned mud. Rotating & moving pipe every 10 min. Trip up into casing SDFN. Will trip back to T.D., condition hole & lay down tubing today (11/7/96). Will run and cement into place 5 1/2" casing 11/8/96.

11-8-96
PBD: 5,871'
Bit: 1, 7 7/8" Reed HP51, In @ 0.Jets 12-13-14 reaming.
Mud: Wt.10.1, Vis 48, WL 7.6, FC 2/32, Ph 10.5, PV 22, YP 13, Gels 5/10, PF/MF .1/.6 , Solids 14.1, Sand 1/4, Calcium 220, Chlorides 21,500
BHA: Bit, bit sub, 8.4 3/4 DC- XO tubing
WOB - 4-6000 , RPM 50, Pump 1250 psi, GPM 146, AVDP/AVDC 61-96
Pump:#1 4 x 5, 200 SPM
#2 3 x 4
Operations: Started up operations @ 7 AM. Trip in hole to 5,734' found tight spot. Washed & reamed 10 ' & freed up. Trip in hole to 5,871' circulated & conditioned hole. Short trip 5 stand. No tight spots. Trip out laying down tubing and drill collars. Nippled down 7" drilling nipple. Changed out for reinforced 8 5/8" nipple. Hooked up flow line. SDFN @ 7 P.M. Ready to run casing by 8 A.M.

FORM 7

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

RECEIVED
NOV 25 1996
DIV OF OIL, GAS & MINING

REPORT OF WATER ENCOUNTERED DURING DRILLING

1. Well name and number: Knockdhu Unit #2

   API number: 43-037-31779

2. Well Location: QQ SE NW Section 33 Township 37S Range 25E County San Juan Co., UT
   SE

3. Well operator: Petral Exploration, LLC

   Address: c/o McIlnay & Associates, Inc.
   2305 Oxford Lane
   Casper, WY 82604 Phone: (307) 265-4351

4. Drilling contractor: Four Corners Drilling

   Address: 5651 U.S. Hwy 64
   Farmington, NM 87499 Phone: (505) 326-3370

5. Water encountered (attach additional pages as needed):

DEPTH		VOLUME	QUALITY
FROM	TO	(FLOW RATE OR HEAD)	(FRESH OR SALTY)
2893	2933	1 GPM	Salty
3735		"	"
4518		"	"
5288		" & dead	"
5507		" Mudded up	"

6. Formation tops: Attached

If an analysis has been made of the water encountered, please attach a copy of the report to this form.

I hereby certify that this report is true and complete to the best of my knowledge. Date: November 15, 1996

Name & Signature: Edward W. McIlnay Edward W McIlnay Title: McIlnay & Associates, Inc. Consulting Engineers

(7/93)

Elevations: **5437' KB** **5425'GL**

Formation Tops

Honaker Trail	4432'
La Sal	5192'
Paradox Shale	5474'
Upper Ismay	5499'
Upper Ismay massive anhydrite	5529'
Upper Ismay carbonate	5535'
Hovenweep Shale	5623'
Lower Ismay	5669'
Lower Ismay anhydrite	5687'
Lower Ismay carbonate	5710'
Gothic Shale	5721'
Upper Desert Creek	5741'
Upper Desert Creek anhydrite	5741'
Upper Desert Creek carbonate	5766'
Lower Desert Creek	5774'
Lower Desert Creek anhydrite	5792'
Lower Desert Creek carbonate	5798'
Chimney Rock Shale	5816'
Akah	5836'
Total Depth	5871'

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915, AND UNIT#1.
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: December 20, 1996
pages: 4, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

12-13-96
PBTD: 5,827' **CSG SIZE/WT:** 5 1/2", 15.5#.
Details:
Using a cat moving Big "A" rig from Knockando Unit # 2 to Knockdhu Unit #2. Could not get equipment entirely up road and to location due to muddy roads.

12-14-96
PBTD: 5,827' **CSG SIZE/WT:** 5 1/2", 15.5#
Details:
Using a cat, pulled Big "A" pulling Unit to Knockdhu #2 location. Location to wet to move in and rig up. Have strong wind blowing and hopefully will dry out enough to move on 12/15/96.

12-15-96
PBTD: 5,827' **CSG SIZE/WT:** 5 1/2", 15.5#
Details:
Moved in and rigged up Big "A" service rig. Spotted tanks and circulated equipment. Nipped up BOP. Notified BLM engineer Mr. Eric Jones of BOP pressure test scheduled for 12/16/96 P.M. Scheduled cased hole loggers for 12/16/96 8:00 A.M. Scheduled Dowell for 12/17/96 7:00 A.M. to spot acid. Cased hole loggers scheduled to perforate Upper Ismay 9:00 A.M. 12/17/96. Filled 400 Bbl. tank with 250 Bbls of 2% KCl containing, 1 GPT F75 surfactant, 2 GPT W54 non-emulsifier and 2 GPT L55 clay stabilizer.

12-16-96
PBTD: 5,797.5' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft **TBG SIZE:** 2 3/4" 4.7# **JTS IN WELL:** 95
Details:
Pressure tested rig pump to 3200 psig ok. MIRU Schlumberger RIII with junk basket and 5 1/2" 15.5 lb/ft gauge ring. Measured depth to PBTD 5784' RU Schlumberger ran CBL-CCL & Vol from 5784' to 3574'. top of cement at 3704'. Bond log run under 1000 psig casing pressure. Good bond isolating zone to be perforated. Pressure tested casing and BOP to 2800 psig for 15 minutes. Pressure held steady. Ran bond log from PBTD to 5540' at zero casing pressure. Picked up 4 3/4" bit and scraper, tallied tubing, rabbited and tripped in hole with 75 jts of 2 3/8" 4.7 #/ft 8 EUE tubing. SDFN.

12-17-96
PBTD: 5,784' **PERFS:** 5,587' to 5,601' 4 SPF **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
SICP: 5 psig **TBG SIZE:** 2 3/8" **JTS IN WELL:** 20
Details:
Continued running bit, scraper and 90 joint of 2 3/8" tubing. Tagged PBTD 185 jts. in hole at 5784' KB (corrected to log depth). Spoke to Jeff Brown with BLM, informed him of the 2800 psig blind ram test on 12/16/96 and the upcoming pipe ram pressure test today. Dowell pressure tested BOP and casing to 3030 psig for 15 min. Pressure test recorded on DS strip chart. Layed down 1 joint. Dowell reverse circulated the hole clean with 130 Bbl 2% KCl with additives. Pulled and layed down 5 joints, spotted 5 Bbl 15% MSR- 100 acid with additives at 5607' and displaced with 19.5 Bbls 2% KCl. Pulled 8 jts slowly to prevent swabbing and diluting acid with water. Swabbed 63 Bbl of 2 % KCl back into tank. Schlumberger requested 3000' of fluid above perforating gun. Pulled 171 jts. tubing. RU Schlumberger and ran in hole with 3 1/2" EHC perforating gun and CCL. Fluid level before perforating was at 3,000'. Tagged PBTD, recorded 6 casing collars, correlated depth to CBL. Perforated the Upper Ismay mound from 5,587' to 5,601' with 4 SPF with 56 34 gram jet charges. No apparent change in fluid level after perforating. RD Schlumberger. Picked up Baker mechanical collar indicator locator, PPIP tool with 4' spacing, 6.25' by 2 3/8" lift sub and a 1.87" ID F-nipple and ran in hole with 20 joints of 2 3/8" tubing for kill string. SDFN

12-18-96

PBTD: 5,784' **PERFS:** 5,587' to 5,601' 4 SPF **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
SICP: 5 psig **TBG SIZE:** 2 3/8" **JTS IN WELL:** 171 **PKR/AC @** 5,369'
SWAB DOWN: Recovered 25.9 Bbls. 0% Oil, 100%WTR, TR % BS.
SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	Oil%	WTR%	BS%	Remarks
3:15 P.M.	0	1755	6.1	0	6.1	0	100	TR	2% KCl
3:30 P.M.	1600	2900	6.1	0	6.1	0	100	TR	2%KCl
3:45 P.M.	2700	4300	6.1	0	6.1	0	100	TR	2% KCl and spent acid
4:05 P.M.	3200	5347	6.1	0	6.1	0	100	TR	Steady gas blow
4:50 P.M.	4600	5347	1.5	0	1.5	0	100	TR	Vacuum

Total Hrs Swabbed 1.35hr **Total Fluid Swabbed** 25.9 Bbls , 0 **BO**, 25.9 **BW**, 0 **BBS**
Total Load 25.6 Bbls of KCl water and acid. **Load recovered to date** 25.9 Bbls.
Load to recover 0 Bbls.
Details:
Continued in hole with mechanical collar locator, PPIP and F-Nipple, and 151 joints 2 3/8" tubing (171 joints total). Set packer at 5,369'. Dowell filled casing with 42 Bbl of 2% KCl water and pressured annulus to 500 psig. Injected 5.5 Bbl of KCl water down tubing to displace acid into the perfs at 0.05 BPM and 2200 psig. Did not exceed 2280 psig. Made 5 swab runs recovering 26 Bbls of KCl water and spent acid. Had steady gas blow after fourth run, no gas after fifth swab run. SIW- SDFN.

12-19-96

PBTD: 5,784' **PERFS:** 5,587' to 5,601' 4 SPF **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
14 **hrs. Shut in SITP:** 200 psig **TBG SIZE:** 2 3/8" **JTS IN WELL:** 171
PKR/AC @ 5,369' F.L. @ 3300'= 2069' or 8.0 Bbls of fill up.
SWAB DOWN: Recovered 19.9 Bbls. 25% Oil, 75%WTR, 0.1 % BS.
SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	Oil%	WTR%	BS%	Remarks
8:00 A.M.	3300	4900	6.7	4.4	2.3	65	35	0.1	Clean oil
8:30 A.M.	4300	5347	6.7	.07	6.6	1	99	TR	
9:00 A.M.	4700	5347	3.3	.07	3.2	2	98	TR	Emulsion & H20
9:30 A.M.	5100	5347	.8	.08	0.7	10	90	TR	"
									Putting out fire on Knockdhu #1 line
12:00P.M.	4700	5347	.8	.08	.72	10	90	TR	Emulsion & H20
12:30P.M.	4900	5347	.4	.04	.36	10	90	TR	"
2:00P.M.	4900	5347	.4	.06	.34	15	85	TR	"
3:00 P.M.	4900	5347	.4	.06	.34	15	85	TR	"
4:00 P.M.	4900	5347	.4	.06	.32	15	85	TR	"

Total Hrs Swabbed 5:30hr **Total Fluid Swabbed** 19.9 Bbls , 4.9 **BO**, 15 **BW**, 0 **BBS**

Details:
SITP was 200 psig after 14 Hrs., flared gas for approximatly 6 min. Recovering 0.8 MSCF gas. Swabbed well for 5.5 hours. Recovering 4.9 BO and 15 BW. Obtained fluid samples on each run.

12/19/96 Knockdhu Unit #1

Shut in well at 7:30 A.M. to repair pinhole leak in the poly gas line near the #2 Knockdhu Unit well. Triad construction repaired the leak which was at a weld seam. Started the well tank on production. Approximately 1 hour later another leak developed in the line about 50 yards from the first leak. The 2nd leak caught fire and burned 3 trees down. The rig crew from the #2 Knockdhu Unit, and the Petral represenative, Dan Herrman shut the #1 Knockdhu unit in and put out the fire using extinguishers from the rig. The BLM was notified and Jeff Brown, BLM tech., inspected the site. A visual inspection of the entire poly gas line found 1 more pinhole leak which appeared the be associated with a gauge in the pipe. The leak was repaired. The well will be returned to production Fri A.M. After the well is started up another visual inspection of the entire line will be performed. A sample of the poly line was taken by the contractor, Triad Western, to be analyzed. Arrangements are being made to sample the gas at the inlet and outlet of the line today to determine if liquids are dropping out in the line.

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: December 27, 1996
pages: 2, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

12-20-96
PBTD: 5,784' **PERFS:** 5,587' to 5,601' 4 SPF **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
14 **hrs. SITP:** 140 psig **TBG SIZE:** 2 3/8" **JTS IN WELL:** 171
PKR/AC @ 5,369' F.L. @ 3500'= 1869' or 7.2 Bbls of fill up.
SWAB DOWN: Recovered 11.1 Bbls. 17.0% Oil, 82.9%WTR, 0.1 % BS.

Total Hrs Swabbed 8hr **Total Fluid Swabbed** 11.1 Bbls , 1.9 **BO**, 9.2 **BW**, 0 **BBS**

Details:
SITP was 190 psig after 14 Hrs., flared gas for approximatly 5 min. Recovered 0.3 MSCF gas. Swabbed well for 8 hours. Recovered 1.9 BO and 9.2 BW.

12-21-96
PBTD: 5,784' **PERFS:** 5,587' to 5,601' 4 SPF **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
14 **hrs. Shut in SITP:** 125 psig **TBG SIZE:** 2 3/8" **JTS IN WELL:** 171
PKR/AC @ 5,369' F.L. @ 3700'= 1669' or 6.5 Bbls of fill up.

SWAB DOWN: Recovered 8.8 Bbls. 16% Oil, 84%WTR, 0.2 % BS.
Total Hrs Swabbed 8hr **Total Fluid Swabbed** 8.8 Bbls , 1.4 **BO**, 7.4 **BW**, 0 **BBS**

Details:
SITP was 125 psig after 14 Hrs., flared gas for approximatly 5 min. Recovered 0.2 MSCF gas. Swabbed well for 8 hours. Recovered 1.4 BO and 7.4 BW. Measured SG, PH and chlorides.

12-22-96
PBTD: 5,784' **PERFS:** 5,587' to 5,601' 4 SPF **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
14 **hrs. SITP:** 120 psig **TBG SIZE:** 2 3/8" **JTS IN WELL:** 180

Details:
Released packer (Baker PPIP tool) pooh with 171 joints tubing. RIH with tubing open ended to 5,632' KB. Loaded hole with 2% KCl. Dowell circulated 10 Bbls fresh water followed by 25sx class "G" cement and 0.5% B-14 fluid loss additive (5 Bbls of slurry), followed by 2 Bbls fresh water and 18 Bbls 2% KCl water. POOH 14 joints tubing to 5,194' KB. Reverse circulated with 25 Bbls, 2% KCl water, got 1/4 Bbl cement. Shut BOP and began stages, Braden head squeeze with max pressure of 2000 psig. Staged 6 times over 1:45 min, injected 1.6 Bbl cement into perforations. Final squeeze pressure 2100 psig. Shut in well with 2100 psig on tubing and casing. Shut down @ 5:00 P.M.

12-23-96
PBTD: 5,580' **PERFS:** 5,587' to 5,601' (squeezed) **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
14 **hrs. SITP:** 2000' psig **SICP:** 2000' **TBG SIZE:** 2 3/8" **JTS IN WELL:** 178

Details:
Bled off shut-in squeeze pressure. RIH with 9 Jts. + 8' and tagged plug @ 5484' KB. POH open ended. RIH w/4 3/4" bit and scrapper. Drilled cement from 5487' to 5580' KB. Pressure tested casing to 2300 psig for 15 min. Circulated hole with 2% KCl + additives. Shut in well.

12/24-26/96
Operations suspended until Friday 12/27/96. Ready to spot acid and swab well down in preparation for perforating the Upper Ismay Mound from 5550 - 5579' KB. Will perforate on Saturday 12/28/96.

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: January 3, 1997
pages: 4, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
fax: 307 473 1218

1-1-97
Well shut down for Holiday.

1-2-97
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 177 **PKR/AC:** @ 5566' KB (log)
38 **hrs.** **SITP:** 272 psig **SICP:** 30 **Swab down:** Rec. 18.3 Bbls. 13% Oil, 87% WTR.

Details: Flared gas for 23 minutes recovering 3 Mcf. Swabbed lower perfs for 8.5 hours recovering 2.4 BO and 15.9 BW. Average chloride concentration 196,000 MG/L. Shut in well.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	BS %	Remarks
8:30 A.M.	3300	5200	8.3	.8	7.5	10	90		SG = 1.14
9:00 A.M.	4680	5548	3.3	.7	2.6	20	80		SG = 1.14 190,000 MG/L
9:30 A.M.	5300	5548	.4	.1	.3	17	83		SG = 1.14 210,000 MG/L
11:00 A.M.	4700	5548	1.3	.2	1.1	14	86		SG = 1.14 180,000 MG/L
12:00 P.M.	5250	5548	1.3	.2	1.1	13	87		SG = 1.14 180,000 MG/L
1:00 P.M.	5100	5548	.8	.1	.7	12	88		SG = 1.14 200,000 MG/L
3:00 P.M.	5200	5548	1.3	.1	1.2	10	90		SG = 1.14 190,000 MG/L
4:00 P.M.	5200	5548	.8	.1	.7	12	88		
5:00 P.M.	5200	5548	.8	.1	.7	12	88		SG = 1.14 220,000 MG/L

Total Hrs Swabbed: 8.5 hrs. **Total Fluid Swabbed:** 18.3 **BO:** 2.4 **BW:** 15.9,
Total Load: .8 Bbls, **Load Rec. to Date:** .8 Bbls, **Load to Recover:** 0 Bbls.

12-30-96

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 160 **PKR:** @ 5020' **SICP:** 100 psig
17 **hrs.** **SITP:** 390 psig **FL** @ 2800' = 2220' or 8.6 Bbls. **Swab down:** Rec. 21.1 Bbls.
18% Oil,
82% Water, TR % BS.
Details: 17 hour SITP 390 psig. Flared gas for 17 min. (30 Mcf) swabbed well for 8 hours recovering 3.9 BO and 17.2 BW. Steady gas flare after each swab run, approximately 50 Mcf/ day.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	BS %	Remarks
8:00 A.M.	2800	4100	5.4	1.6	3.8	30	70		
9:00 A.M.	3500	5020	5	.5	4.5	10	90	1	
10:00 A.M.	3800	5020	1.3	.1	1.2	10	90	1	SG 1.02
11:00 A.M.	4400	5020	1.7	.2	1.5	14	86	TR	SG = 1.09
12:00 P.M.	4000	5020	1.7	.3	1.4	16	84	TR	SG = 1.10
1:00 P.M.	4600	5020	1.7	.3	1.4	20	80	TR	SG = 1.12
2:00 P.M.	4600	5020	1.7	.3	1.4	20	80	TR	SG = 1.12
3:00 P.M.	4800	5020	1.3	.3	1.0	20	80	TR	SG = 1.12
4:00 P.M.	4800	5020	1.3	.3	1.0	20	80	TR	SG 1.12

Total Hrs Swabbed 8 hrs. **Total Fluid Swabbed:** 21.1 **BO** - 3.9 **BW** - 17.2, 0 **BBS**
Note: 15 1/2 hr. SITP 620 psig @ 7:30 A.M. 12/31/96.

12-31-96

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 177 **PKR/AC:** @ 5566' KB (log)
15 **hrs.** **SITP:** 620 psig **Swab down:** Rec. 20.7 Bbls. 2% Oil, 98% WTR.

Details: 15 hour SITP 620 psig. Flared gas for 1 hour . Recovering approximately 90 Mcf. Released packer, allowed tubing and casing to equalize. Tubing flowed approximately 3 BO to tank. Set packer between perforated intervals at 5566'. Swabbed lower perfs for 7.5 hours recovering, 0.4 BO and 20.3 BW. Shut in well for New Years.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	BS %	Remarks
9:00 A.M.	1170	2925	3.3	0	3.3	TR	100		
9:30 A.M.	2340	4100	3.3	0	3.3	TR	100		
10:30 A.M.	2925	4680	3.3	0	3.3	TR	100		Changed swab cups
11:30 A.M.	3510	5548	6.7	.3	6.4	5	95		
12:30 P.M.	4700	5548	1.7		1.7	2	98		
1:30 P.M.	5300	5548	.4		.4	5	95		
2:30 P.M.	5300	5548	.8		.8	5	95		SG = 1.14
3:30 P.M.	5200	5548	.8		.8	5	95		SG = 1.14
4:30 P.M.	5200	5548	.4	.1	.3	10	90		SG 1.14

Total Hrs Swabbed: 7.5 hrs. **Total Fluid Swabbed:** 20.7 **BO:** 0.4 **BW:** 20.3,
Total Load: 21.5 Bbls, **Load Rec. to Date:** 20.7 Bbls, **Load to Recover:** 0 .8 Bbls.

12-27-96
PBTD: 5,580' **PERFS:** 5,587' to 5,601' (squeezed) **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft

Details:
Moved in and rigged up Dowell. Spotted 5 Bbls. of 15% HCl + additives across completion interval (5550.- 5558' & 5568 - 5579' KB). Top of acid 5370'. Displaced with 20.5 Bbls. 2% KCl + additives. Obtained sample of KCl for injectivity tests. POH w/10 stands tubing. Swabbed 60 Bbls. of KCl water. Fluid level at ≈ 2500'. TOH and tallied tubing (doubles tallied 1.45' less than single joint tally). Will perforate in AM.

12-28-96
PBTD: 5,580' **PERFS:** 5,587' to 5,601' (squeezed) **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 160 **PKR:** @ 5020'

Details:
Moved in and rigged up Schlumberger. RIH w/ 3 1/2" HSD gun and CCL. Tagged top of squeeze plug at 5586' KB. Logged 6 casing collars with CCL. Correlated depth to GR-CBL-CCL and perforated as follows with Type 37J, 34 gram charges at 4 shots per foot.

Perforated 5568 - 5579' - Logger observed FL @ ≈2800'.
RIH w/3 1/2" HSD gun and CCL. Tagged plug and correlated depth to GR-CBL-CCL.
Perforated 5550 - 5558' - Logger observed FL @ ≈2850'

After shot, RIH w/Baker PPIP Tool, 8' sub and 1.87" "F" Nipple. Set packer w/"F" Nipple @ 5020' KB. Filled casing w/50 Bbls. of 2% KCl + additives.

12-29-96
PBTD: 5,586' **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 160 **PKR:** @ 5020'
16 **hrs. SITP:** 20 psig **FL** @ 1470' = 1330' or 5 Bbls. **Swab down:** Rec. 27.1 Bbls. 100% water

Details:
Moved in and rigged up Dowell. Pressure tested lines, filled tubing w/5.7 Bbls. 2% KCl. Pressured casing to 450 psig and displaced acid with 7.3 Bbls. 2% KCl at an average rate of .06 BPM @ 1850 psig. Swabbed 27.1 Bbls. of water. Gas blow after third swab run, no trace of oil. Shut in well.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	Oil	WTR	OIL %	WTR %	BS %	Remarks
10:00 A.M.		1755					100		
10:30	1700	3510	14.2	0	19.2	0	100		
11:00	2800	5020	5.0	0	5.0	0	100		GTS - Lazy flare
12:00 P.M.	3200	5020	5.0	0	5.0	0	100		
12:30	3700	5020	1.7	0	1.7	0	100	2	
1:00	4400	5020	0.4	0	0.4	0	100	2	
1:30	4600	5020	0.4	0	0.4	0	100	2	1.01 SG water
2:00	4700	5020	0.4	0	0.4	0	100	2	

Total Hrs Swabbed 4 hrs. **Total Fluid Swabbed:** 27.1 1 **BO** - 0 **BW - 27.1, 0 BBS**
All load recovered.

CORELAB

CORE LABORATORIES

01-09-1997

CONFIDENTIAL

LAB #: 962627-1

PETRAL EXPLORATION, LLC 43 03731774

BULL ROGERS, INC.
HOBBS, NEW MEXICO (505) 393-9342
PERRYTON, TEXAS (806) 435-3833

WELL #: 2 KNOCKANDO UNIT, UTU 043651
COUNTY: SAN JUAN STATE: UT
FORMATION: UPPER ISMAY
DATE SAMPLED:
REMARKS:

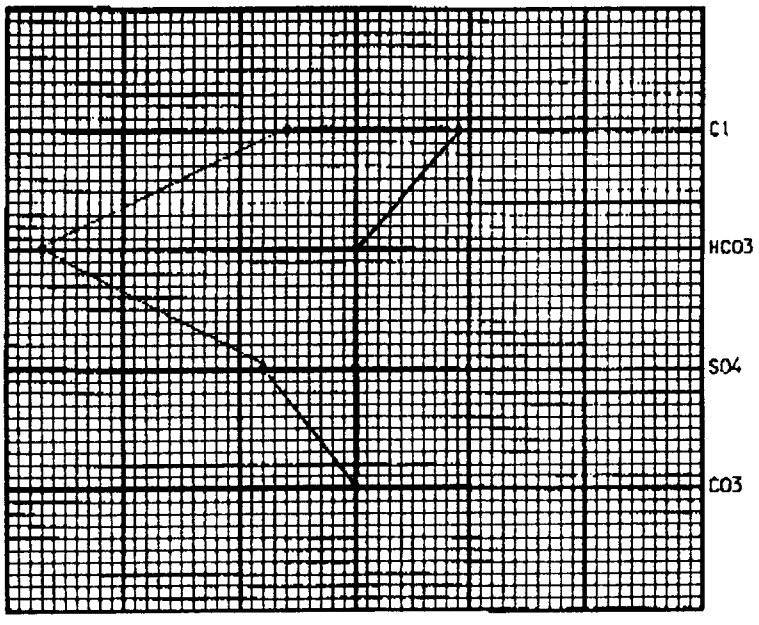
State of Utah

9-T37S-R25
104'-5134'

	MG/L	MEQ/L		L
SODIUM	48000	2088.00	S	51
POTASSIUM	2300	58.88	C	00
CALCIUM	18300	913.17	C	00
MAGNESIUM	3400	279.48	B	00
			H	00
TOTAL CATIONS		3339.53		51

	MG/L	
CALC. SODIUM	46071	SPECIFIC R
NACL EQUIVALENT	189563	
CALC TDS* @356 F	187570	
API TDS* @221 F	187632	OBSERVED pH 5.33

* TOTAL DISSOLVED SOLIDS



WATER ANALYSIS PATTERN
Scale
MEQ per Unit

(Na value in graph includes Na and K)

NOTE: MG/L = milligrams per liter
MEQ/L = milligram equivalent per liter

Sodium Chloride equivalent by Dunlap & Hawthorne - calculation from components

CORELAB

CORE LABORATORIES

01-09-1997

CONFIDENTIAL

43 03731779

LAB #: 962627-1

PETRAL EXPLORATION, LLC

WELL #: 2 KNOCKANDO UNIT, UTU 043651
COUNTY: SAN JUAN STATE: UT
FORMATION: UPPER ISMAY
DATE SAMPLED:
REMARKS:

FIELD:
LOCATION: MW NE SW SEC. 19-T37S-R25
INTERVAL: 5084-89',5092-5104'-5134'
SAMPLE ORIGIN:

	MG/L	MEQ/L		MG/L	MEQ/L
SODIUM	48000	2088.00	SULFATE	510	10.61
POTASSIUM	2300	58.88	CHLORIDE	115000	3243.00
CALCIUM	18300	913.17	CARBONATE	0	0.00
MAGNESIUM	3400	279.48	BICARBONATE	122	2.00
			HYDROXIDE	0	0.00
TOTAL CATIONS		3339.53	TOTAL ANIONS		3255.61

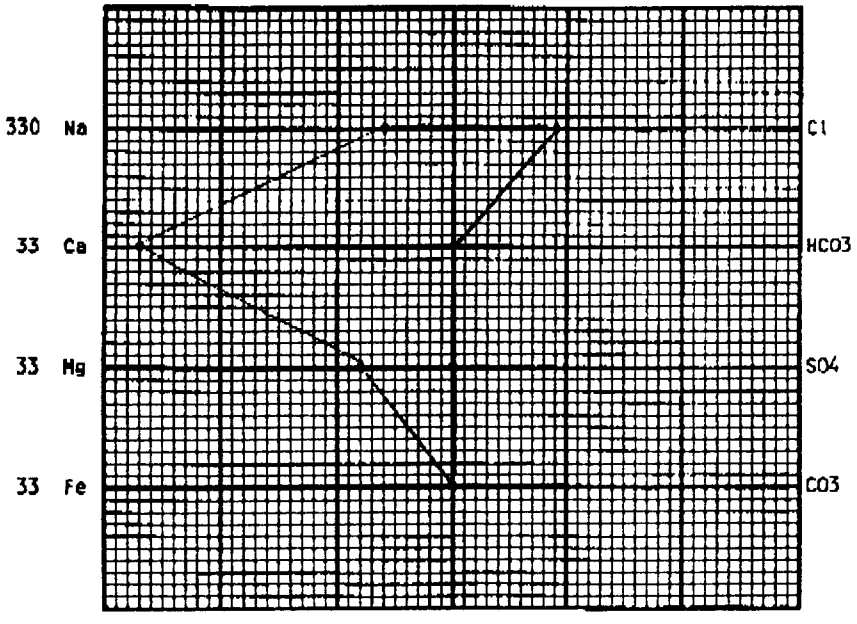
	MG/L
CALC. SODIUM	46071
NACL EQUIVALENT	189563
CALC TDS* @356 F	187570
API TDS* @221 F	187632

SPECIFIC RESISTANCE AT 68F (OHM-M):
OBSERVED 0.07

OBSERVED pH 5.33

* TOTAL DISSOLVED SOLIDS

WATER ANALYSIS PATTERN
Scale
MEQ per Unit



(Na value in graph includes Na and K)

NOTE: MG/L = milligrams per liter
MEQ/L = milligram equivalent per liter

Sodium Chloride equivalent by Dunlap & Hawthorne - calculation from components

CORELAB

CORE LABORATORIES

LABORATORY TESTS RESULTS
01/09/97

JOB NUMBER: 962627 CUSTOMER: PETRAL EXPLORATION, LLC ATTN:

CLIENT I.D.....: #2 KNOCKANDO UNIT, UTU 043651
DATE SAMPLED.....: / /
TIME SAMPLED.....: :
WORK DESCRIPTION...: ISMAY F PER 5084-89',5092-5104',5134-40'

LABORATORY I.D...: 962627-0002
DATE RECEIVED....: 12/31/96
TIME RECEIVED....: 08:39
REMARKS.....: OIL

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
API Gravity, 60/60F	42.18	0.01	Deg. API	ASTM D287	01/06/97	ADF

420 West First Street
Casper, WY 82601
(307) 235-5741

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: January 10, 1997
pages: 4, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473 1218

1-3-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5459' KB
14 **hrs.** **SITP:** 145 psig **SICP:** 100 **Swab down:** Rec. 20.3 Bbls. 5% Oil, 95% WTR.

Details: Flared gas from tubing and casing, recovered 2 MCF. Swabbed tubing recovering .5 BO and 4.5 BW. Fluid level at 4100', released packer. Pooh with 177 jnts and PPIP. Rig in hole with retrievable bridge plug, retrieving sub, packer, 8' sub and 1.87" F-Nipple and 177 jnts 2 3/8. Set RBP at 5563', pulled 3 jnts, set packer at 5459'. Swabbed TBG for 2 hours recovering .5 BO and 14.8 BW. Last swab run, very little fluid entry, mostly oil. TBG pressure built to 15 psig in 10 minutes.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	BS %	Remarks
8:30 A.M.	4100	5548	5	.5	4.5	10	90		
2:30 P.M.	1755	3510	6.7	.3	6.4	5	95		
3:00 P.M.	2900	4700	6.7		6.7	TR	100		Gas Blow
3:30 P.M.	4680	5451	1.7	.1	1.6	5	95		Gas Blow
4:30 P.M.	5300	5451	.2	.1	.1	65	35		Gas Blow

Total Hrs Swabbed: 2.5 hrs. **Total Fluid Swabbed:** 20.3 **BO:** 1 **BW:** 19.3,
Total Load: 14.3 Bbls, **Load Rec. to Date:** 15.3 Bbls, **Load to Recover:** 0 Bbls.

1-4-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5459' KB
14 **hrs.** **SITP:** 740 psig **SICP:** 0 **Swab down:** Rec. 4 Bbls. 97% Oil, 3% WTR.

Details: Flared gas for 45 min. recovering ~ 8 MCF gas. Small amount of condensate to surface while flaring gas. Oil is 56° API. Swabbed well for 6 hours recovering 3.9 BO and .1 BW. No fluid entry after run at 1:30 P.M. Shut in well. Dowell scheduled for 10:00 A.M. 1/6/97 for acid treatment.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	BS %	Remarks
8:30 A.M.	4600	5451	3.3	3.3		100	0		
9:30 P.M.	5200	5451	.4	.3	.1	75	25		
11:30 P.M.	5400	5451	.2	.2		100	0		
1:30 P.M.	5400	5451	.1	.1		60	40		Sp.G. - 1.06 90,000 mg/liter
2:30 P.M.	5450	5451							No Entry - No Sample

Total Hrs Swabbed: 6 hrs. **Total Fluid Swabbed:** 4 **BO:** 3.9 **BW:** .1

1-5-97

Shut down Waiting on Dowell.
Note: @ 7:00 A.M. 1/6/97 40hr. **SITP** 1100 psig. SICP 0 psig.

1-6-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft **TBG SIZE:** 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5459' F.L. @ 5,000 – 458 or 1.7 Bbl of fill up

40 **hrs.** **SITP:** 1100 psig **SICP:** 0 **Swab down:** Recovered 36.7 Bbls 5% **Oil**, 95% **WTR.**

Details: Flared gas for 30 min. recovering ≈ 6 MCF and 2.9 BO. Made one swab down run, found fluid at 5,000', recovering 1.7 BO. Released packer, run in hole 3 joints to 5,553'. Filled tubing and casing with 56 Bbls of 2 % KCl. Dowell spotted 6 Bbls 15% HCl, 2 Bbls gelled KCl w/1/4 lb/gal benzoic acid flakes, and 6 Bbls 15% HCl. Displaced with 19.5 Bbls 2% KCl POH slowly 16 joints to 5,051. Set packer, displaced acid at an average rate of 0.7 BPM, and 1,700 psig surface treating pressure, 15 Bbls total displacement. Released packer, run in hole with 13 joints tubing . Set packer at 5,458' KB. Swabbed well for 3.5 hours. Recovering 34.8 BW and 0.2 BO. Gas blew after 3rd swab run. Gas after each run. Show of oil on last swab run.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	BS %	Remarks
8:30 A.M.	5000	5459	1.7	1.7	0	100	0		
1:30 P.M.	surf	1755	6.7		6.7		100		2% KCL
2:00 P.M.	1300	3000	6.7		6.7		100		
2:30 P.M.	2340	3510	6.7		6.7		100		Gas Blow
3:30 P.M.	2925	4600	5.8		5.8		100	2%	PH – 6.5, gas flare 150 – MCFD
4:00 P.M.	3510	5450	5.8		5.8		100	2%	PH 6.5
5:00 P.M.	3510	5450	3.3	.2	3.1	7	93	1%	PH 6.5

Total Hrs Swabbed: 4 hrs. **Total Fluid Swabbed:** 36.7 **BO:** 1.9 **BW:** 34.8
Total Load: 35 Bbls. **Load Rec. to date:** 35 Bbls. **Load to Recover:** 0 Bbls
Note: 1/7/97, 7:00 A.M. 13 hour SITP

1-7-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft **TBG SIZE:** 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5458' F.L. @ 1,755 – 3703' or 14.3 Bbl of fill up

14 **hrs.** **SITP:** 645 psig **SICP:** 0 **Swab down:** Rec. 25.8 Bbls. 21% Oil, 79% WTR.

Details: Flared gas for 30 min. recovering ≈5 MCF and 0.5 BW, and .25 BO. Swabbed well for 8 hours recovering 5.5 BO, and 20.3 BW. Shut in well for night.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	BS %	Remarks
8:30 A.M.	1755	3500	5	1.3	3.7	25	75		SGW = 1.11, Ph = 6.5
9:00 A.M.	2900	4000	2.5	.1	2.4	5	95		
10:00 A.M.	3510	5450	5	1	4	20	80		
10:30 A.M.	4100	5450	2.5	.5	2	20	80		
12:00 P.M.	4200	5450	3.3	.7	2.6	20	80		SGW – 1.13, PH – 6.5, 140,000 mg/l CL
1:30 P.M.	4200	5450	2.5	.5	2	20	80		
3:30 P.M.	4200	5450	3.3	1	2.3	30	70		SGW – 1.14, PH – 6.5 150,000 mg/l CL
4:30 P.M.	4200	5450	1.7	.4	1.3	25	75		

Total Hrs Swabbed: 8 hrs. **Total Fluid Swabbed:** 25.8 **BO:** 5.5 **BW:** 20.3
Note: 1/8/97 7:00 A.M. 14 hr SITP 900, SICP 0.

1-8-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5458'
14 hrs. SITP: 900 psig **SICP:** 0

Details: Flared gas for 45 min. recovering ≈ 9 MCF. Well began flowing condensate when tubing presssure dropped to 250 psig. Attempted to bleed pressure using 2" ball valve as a choke at 1:00 P.M., flowing tubing pressure was 300 psig with condensate. Shut in well. Did not want to flow to test tank because of gas volume and could not flow to pit because of condensate. MIRU Cullum 3-phase separator. Pressure tested lines and vessel. Shut down and shut in well at 5:20 P.M. Will fill seperator with produced water and calibrate 3" Barton meter 1/09/97 A.M.

Note: 1/9/97 7:00 A.M. 14 hour SITP 720 psig, SICP 0 psig.

1-9-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5458' F.L. @ 1,755 = 3703' or 14.3 Bbl of fill up
14 hrs. SITP: 720 psig **SICP:** 0 **Swab down:** Rec. 24.8 Bbls. 31% Oil, 69% WTR.

Details: Filled seperator with produced water. Opened well to 3 phase seperator at 8:00 A.M. flowed 0.8 BO, 0.45 BW and 7.5 MCF. Swabbed well through test seperator for 7 hours recovering 24.8 BTF, 7.8 BO, 17 BW and 30 MCF. Well flowed gas after each swab run at an everage rate of 90 MCFD.
Jeff Brown with the BLM surveyed location at 3 P.M. with no comments.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	Gas/ MCFD	Remarks
10:00 A.M.	1700	4200	3.4	2.5	.9	74	26	150	48/64 Choke
11:00 A.M.	3200	5450	7.1	1.7	5.4	24	76	120	48/64
11:30 A.M.	2340	5450	2.6	.8	1.8	31	69	110	48/64
12:30 P.M.	3100	5450	1.7	.8	.9	47	53	100	Calibrated Gas Chart 48/64
1:30 P.M.	3800	5450	1.7		1.7		100	65	SGW = 1.14 150,000 mg/l Cl.
3:00 P.M.	3800	5450	3.5	.8	2.7	23	77	60	48/64
4:00 P.M.	4200	5450	1.7	.8	.9	47	53	55	SGW = 1.14 150,000 mg/l Cl., 48/64
5:00 P.M.	4200	5450	3.1	.4	2.7	13	87	60	Blew down WTR line to tank

Total Hrs Swabbed: 7 hrs. **Total Fluid Swabbed:** 24.8 **BO:** 7.8 **BW:** 17
Note: 1/10/97 7:00 A.M. 14 hr SITP 900, SICP 0.

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: January 17, 1997
pages: 3, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

1-10-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5458' F.L. @ 3,500 = 1958' or 7.6 Bbl of fill up
14 **hrs.** **SITP:** 900 psig **SICP:** 0 **Swab down:** Rec. 16.9 Bbls. 37% Oil, 63% WTR.

Details: Opened well to seperator on a 18/64 choke. Flared gas for 2.5 hours recovering ≈20 MCF gas. Swabbed well for 7 hours recovering 6.2 BO, 10.7 BW and 18 MCF. Average gas rate was 61 MCFD between swab runs.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	Gas/ MCFD	Remarks
10:00 A.M.	3500	4800	2.6	2	.5	80	20		
11:00 A.M.	2340	5450	4	1.7	2.3	43	57		
12:00 A.M.	3500	5450	2.9	.4	2.5	14	86		
1:00 P.M.	3500	5450	3.1	1.3	1.8	42	58		
2:00 P.M.	4100	5450	1.7	.4	1.3	24	76		150,000 mg/l CL
3:00 P.M.	4100	5450	.5		.5		100		150,000 mg/l CL
4:00 P.M.	3500	5450	1.7	.4	1.3	24	76		180,000 mg/l CL
5:00 P.M.	3800	5450	.5		.5		100		

Total Hrs Swabbed: 7 hrs. **Total Fluid Swabbed:** 17 **BO:** 6.2 **BW:** 10.8

1/11-12/97

Well shut in Sat. and Sun. Waiting on design of acid frac job.

1-13-97 7:00 A.M.

Overnight snowed = 1' of snow. This A.M. blowing and snowing hard. Roads are blocked with drifts. Are contacting county to see if, and when, they are going to plow county roads. Will have Triad Construction open leased roads and non county roads after Co. opens = 30 miles of county roads. North and South roads out of Blanding, Utah are closed with 8' to 9' drifts.
On location @ 8:00 A.M. 64 hr. SITP 1700 psig. Currently blowing well down. Will pull packer, RBP and
rerun packer today. Acid frac Wed. A.M. Still snowing this A.M.

1-14-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5456' F.L. @ 3,600 = 1856' or 7.2 Bbl of fill up
64 **hrs.** **SITP:** 1700 psig **SICP:** 0 **Swab down:** Rec. 10.5 Bbls. 49% Oil, 51% WTR.

Details: Flowed well through test seperator for 2 hours recovering 1.3 BO, 1.8 BW and 35 MCF gas. Swabbed for 2 hours recovering 3.8 BO and 3.6 BW. Gas rate between swab runs average 130 MCFD. Released packer, RIH with 3 joints tubing., retrieved BP. POH with packer and BP. Picked up fullbore packer, 8ft sub, F-nipple and RIH with 174 joint, 2 3/8" tubing. Set packer at 5456' KB. Dowell scheduled to acidize at 9:00 A.M. 1/15/97.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	Gas/ MCFD	Remarks
9:30 A.M.	SUR		3.1	1.3	1.8	42	58		Flowing
11:30 A.M.	3600	5450	3.9	2.1	1.8	54	46		
12:30 P.M.	2400	5450	3.5	1.7	1.8	4.9	51		

Total Hrs Swabbed: 2 hrs. **Total Fluid Swabbed:** 10.5 **BO:** 5.1 **BW:** 5.4
Note: 1/15/97 7:00 A.M. 14hour SITP 40 psig, SICP 0 psig.

1-15-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5456' 14 **hrs. SITP:** 40 psig
SICP: 0
Swab down: Rec. 19.3 Bbls. 4% Oil, 96% WTR.

Details: Bled pressure off tubing, made 3 swab runs recovering .8 BO and 18.5 BW. MIRU Dowell. Filled casing with 35 Bbls. 2% Kcl and pressured annulus to 800 psig. Pumped 77 Bbls of 28% HCl in two stages of 39 Bbls with a 46 Bbl gelled spacer between stages. Over displaced with 4.5 Bbls of 2% KCl with additives. All fluids were energized at ± 35 quality with N_2. Average liguid rate 5 BPM, average pressure 4500 psig. Injected 95 MCF nitrogen. ISIP = 3930, 15 min SIP − 1560. Flowed back treatment at 3:00 P.M. with FTP − 1240 psig. Well flowed for 3.25 hours recovering 63 Bbls KCl and spent acid. Final FTP = 35 psig. SIW @ 6:20 P.M.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	Gas/ MCFD	Remarks
8:00 A.M.	700	2900	6.7	.8	5.9	12	88		2% KCl
8:30 A.M.	2300	4700	6.7	TR	6.7		100		2% KCl
9:00 P.M.	3500	5448	5.9	TR	5.9		100		Steady Flare

Total Hrs Swabbed: 2 hrs. **Total Fluid Swabbed:** 19.3 **BO:** .8 **BW:** 18.5
Total Load: 168 Bbls. **Load Rec. to date:** 63 Bbls. **Load to Recover:** 105 Bbls
Note: 1/16/97 7:00 A.M. 13hour SITP 560psig.

1-16-97

PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **PKR/AC:** @ 5456' F.L. @ 580 = 4876' or 18.9 Bbl of fill up 13 **hrs. SITP:** 560 psig **SICP:** 750 psig **Swab down:** Rec. 75.2 Bbls. 7% Oil, 93% WTR.

Details: Bled down well, swabbed for 5 hours recovering 5.6 BO and 69.6 BW. Well flowed for 20 min after 12 noon swab and continued flowing after 1:30 P.M. swab run. From 5:00 P.M. to 6:00 P.M. well flowed 55.8 BW and 5 BO at an average FTP of 110 psig flowing gas at over 150 MCFD (0.625 orfice plate too small for flow rate). 1 hour rate at 6:00 P.M. was 11.7 BW, 2.5 BO, 150 + MCFD at 110 psig FTP. Left well flowing on a 36/64 choke. Flow tester on location at 7:00P.M.

SWABBING OR FLOWING REPORT:

Time/ Run No.	Fluid Level	Swab Depth	BTF	BO	BW	OIL %	WTR %	Gas/ MCFD	Remarks
8:30 A.M.	580	2900	7.1	1.7	5.4	24	76		
9:00 A.M.	500	2900	6.7	.2	6.7	3	97		
9:30 A.M.	1170	3510	8.7	.3	8.4	3	97		
10:00 A.M.	1170	3510	6	.3	5.7	5	95		
10:30 A.M.	1170	3510	10.4	.8	9.6	8	92		
11:30 A.M.	1170	3510	4.4	.2	4.2	5	95		
12:00 P.M.	1170	4680	14	.7	13.3	5	95		Began flowing at 12:30.
1:30 P.M.	600	4680	17.7	1.4	16.3	8	92		Began flowing after swab run.

Total Hrs Swabbed: 5 hrs. **Total Fluid Swabbed:** 75.2 **BO:** 5.6 **BW:** 69.6
Total Load: 168 Bbls. **All Load Recovered**
Note: 1/17/97 7:00 A.M. 6 P.M. to 6 A.M. flowed steady for 12 hrs. FTP (Aug) 80 psig currently FTP 60 psig. 36/64" choke flowed 97.9 BW 17.3 BO, 15% oil in 12 hrs. Est.gas rate 300 MCF/D. Only orifice plate on location was too small to measure gas. Will install larger orifice plate this A.M. will also measure water Cl this A.M. Note: 118 Bbls. water over load.

facsimile
TRANSMITTAL

to: State of Utah, Division of Oil, Gas & Mining
fax #: (801) 359-3940
re: Petral Exploration, LLC, #2 Knockdhu, UTU 065915,
SW NW NE Sec. 33-T37S-R25E, San Juan Co., UT
API 43-037-31779, Unit No. 75040X
date: January 24, 1997
pages: 3, including cover sheet.

Attached are weekly status reports on the above referenced well.

If you need any additional information, please do not hesitate to contact our office.

Sharon

From the desk of...

Sharon Orr

McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, WY 82604

307 265-4351
Fax: 307 473-1218

1-17-97
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **SICP:** 1200 psig

Details: Flowed well from 6:00 P.M. (1/16/97) to 5:00 P.M. (1/17/97), 23 hours. Well flowed 29.9 BO, 149.7 BW, 243 MCF. Average FTP = 90 psig. 1 hour production rate at 5:00 P.M., 2.5 BO, 3.6 BW, 283 MCFD at 110 psig. FTP on a 24/64" choke. Flow tester on location at 5:00 P.M. Left well flowing through 3 phase seperator. 8:00 A.M. water sample: SGW - 1.15, 170,000 mg/l Cl. 4:00 P.M. water sample: SGW - 1.15, 160,000 mg/l Cl.

1-18-97
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **SICP:** 1260 psig

Details: Flowing from 5:00 P.M. (1/17/97) to 5:00 (1/18/97), 24 hours. Well flowed 29 BO, 136 BW, 292 MCF on a 28/64" choke at an average FTP of 105 psig. 5:00 P.M. water sample 170,000 mg/l Cl, SGW = 1.15 Left well flowing on a 28/64" choke. Bled down casing pressure to 250 psig.

1-19-97
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 174 **SICP:** 280 psig **PKR/AC:** @ 5456' F.L.

Details: Flowing 5:00 P.M. (1/18/97) to 5:00 P.M. (1/19/97). In 24 hours. Well flowed 25.1 BO, 95 BW and avg. 270 MCFD on a 28/64" choke at an avg. FTP of 100 psig. Left well flowing on a full open choke, 48/64".

1-20-97
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 177 **SICP:** 260 psig **PKR/AC:** @ 5487.1' F.L.

Details: Flowed from 5 PM 1/19/97 to 7 AM 1/20/97 - 14 Hrs. Produced 15 BO, 47.9 BW and 296 MCFD @ 80 psig FTP on a 48/64 CK. Released and pulled packer. RIH w/barred notched collar, "F" nipple (ID 1.43"), Seating Nipple (ID 1.78"), Anchor Catcher and 175 Jts. 2 3/8" tubing. Set @ 5489.1' KB. SN @ 5523.3' and FN @ 5556.6' KB. Bottom of barred collar @ 5558.7' KB. Landed tubing with 10,000 # tension. Rigged up to swab. SDFN

1-21-97
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 177 **PKR/AC:** @ 5487.1' F.L.
SI 14 Hrs. **SITP** 280 psig **SICP** 680 psig **FL** @ 450' = 5108' or 19.8 bls. of fill-up.

Details: Swabbed well for 8 hours. Swabbed 98.8 BTF - 6.3 BO 92.5 BW. 10 minute flare during each swab run. Final SCIP @ 5 PM 900 psi.Total load 123 Bbls. - Recovered 92.5 w/30.5 Bbls. yet to recover. CIW & SDFN

Tubing String

1	Barred Collar @ 5566.03' KB	0.41'
1	2 3/8" x 2 1/16" Swedge @ 5558.19'	0.38'
1	2 1/16 Collar	0.33'
1	2 1/16 x 1.43 "F" Nipple @ 5563.98'	0.93'
1	2 3/8" x 2 1/16" Swedge	0.38'
1	2 3/8" Collar	0.42'
1	Jt. 2 3/8", 4.7#/ft., J-55, EUE tubing	31.46'
1	2 3/8" x 1.78" SN @ 5530.67' KB	1.05'
1	Jt. 2 3/8", 4.7#/ft., J-55, EUE tubing	31.43'
1	Tubing Anchor Catcher @ 5489.1'	2.77'
175	Jts. 2 3/8", 4.7#/ft., J-55, EUE tubing	5486.47'
	Total String	5556.03'
	KB	12.00'
	Tubing Landed Above KB	2.00
	Tubing set at	5566.03 ' KB

Tubing set with 10,000# tension

1-22-97 AM
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 177 **PKR/AC:** @ 5489.1' F.L.
SI 14 Hrs. **SITP** 280 psig **SICP** 1250 psig FL @ 1550' = 4000' or 15.5 Bbls. fill up
Swab Down: Rec. 104.7 Bbls. - 29.5% oil & 70.5% water

Bled tubing pressure down in 10 min. Made one swab run and well began flowing. Flowed for 2 hrs. producing 43.2 BW, 13.4 BO and 473 MCFD gas. made 3 swab runs & well began flowing. Flowed for 2 Hrs. producing 8.3 BO, 19.8 BW and 380 MCFD. Made 2 swab runs recovering 5.8 BO, 3.6 BW. Left well open to test separator on a 10/64 Choke. SICP @ 5:30 PM was 960 psig and FTP 80 psig.

1-23-97
PBTD: 5,586' KB **PERFS:** 5550-58' & 5568 - 79' **CSG SIZE/WT:** 5 1/2", 15.5 lb/ft
TBG SIZE: 2 3/8" **JTS IN WELL:** 177 **PKR/AC:** @ 5489.1' **FL** @ 1755' = 3795' or 14.7 Bbls. Fill **SICP** 1240 psig Swabbed 9 Hrs. Recovered 42.7 Bbls. (17.5 Bbls.) 41% oil & (25.2 Bbls.) 59% Water

Details:
Flowing from 6 PM to 7 AM 1/23/97. Well produced 7.2 BO and 2.5 BW, 40 MCFD in 13 hours. Average FTP 60 psig. Repaired flowline obstruction. Swabbed and flowed well for 9 Hrs. recovering 17.5 BO ,25.2 BW & 135 MCFD. One hour flow rate at 7 PM 0 BO & 0 BW, 47 MCFD @ 40 psig on 14/64 CK. Last 24 Hr, Production 20 BO, 32.9 BW, 90 MCFD. Left well flowing through separator on a 14/64 choke.

Will release rig this AM

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
   [XX] Oil Well [ ] Gas Well [ ] Other
2. Name of Operator
   Petral Exploration, LLC
3. Address and Telephone No. c/o McIlnay & Associates, Inc. 2305 Oxford Lane, Casper, WY 82640 (307) 265-4351
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
   (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

5. Lease Designation and Serial No.
   UTU-065915
6. If Indian, Allottee or Tribe Name
   NA
7. If Unit or CA, Agreement Designation
   Knockdhu Unit 75040X
8. Well Name and No.
   2
9. API Well No.
   43-037-31779
10. Field and Pool, or Exploratory Area
    Unnamed
11. County or Parish, State
    San Juan Co., UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[ ] Other _____	[X] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to dispose of produced water from this well by trucking from the wellsite to the Cochran Resources, Inc. Tin Cup Mesa #1-25 Injection well, SW NW Section 25-T38S-R25E, San Juan Co., UT Lease NO. U-31928. The water will be injected into the Ismay Formation in conjunction with the other waters being injected as part of the ongoing waterflood operation. Cochran Resources, Inc. has a waterflood permit on file with the district BLM office.

Accepted by the State of Utah Division of Oil, Gas and Mining
Date: 3-25-97
By:

RECEIVED
FEB 18 1997
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed _____ McIlnay & Associates, Inc. Title Consulting Engineers Date 2-11-97

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any: ~~Federal Approval of this~~ Action is Necessary

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

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4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
   (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

5. Lease Designation and Serial No.
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6. If Indian, Allottee or Tribe Name
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7. If Unit or CA, Agreement Designation
   Knockdhu Unit 75040X
8. Well Name and No.
   2
9. API Well No.
   43-037-31779
10. Field and Pool, or Exploratory Area
    Unnamed
11. County or Parish, State
    San Juan Co., UT

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TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[XX] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[XX] Other First Production	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

NOTIFICATION OF FIRST PRODUCTION

Knockdhu #2 was put on production @ 3:30 PM 3-11-97 producing at a rate of 347 MCFD.

CONFIDENTIAL

RECEIVED
MAR 17 1997
DIVISION OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed [signature] Title McIlnay & Associates, Inc. Consulting Engineer Date 3-12-97

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

Form 3160-4
(November 1983)
(formerly 9-330)

CONFIDENTIAL

Form approved.
Budget Bureau No. 1004-0137
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUBMIT IN DUPLICATE (See other instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

5. LEASE DESIGNATION AND SERIAL NO.: UTU-065915

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: NA

7. UNIT AGREEMENT NAME: Knockdhu Unit 75040X

8. FARM OR LEASE NAME: Knockdhu

9. WELL NO.: 2

10. FIELD AND POOL, OR WILDCAT: Unnamed

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA: Sec. 33-T37S-R25E

1a. TYPE OF WELL: OIL WELL [X] GAS WELL [X] DRY [ ] Other

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEP EN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] Other

CONFIDENTIAL PERIOD EXPIRED ON 9/16/98

2. NAME OF OPERATOR: Petral Exploration, LLC

3. ADDRESS OF OPERATOR: c/o McIlnay & Associates, Inc.
2305 Oxford Lane, Casper, WY 82604

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*
At surface: SE NW SE Sec. 33-T37S-R25E, 1950' FSL & 1573' FEL
At top prod. interval reported below: Same
At total depth: Same

14. PERMIT NO.	DATE ISSUED	12. COUNTY OR PARISH	13. STATE
43-037-31779		San Juan	UT

15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, RKB, RT, GR, ETC.)*	19. ELEV. CASINGHEAD
9-1-96	9-17-96	3-11-97	5437' KB 5525' GL	----

20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS
5871' DRLR	5586'		→	0 -- 5871'	

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*: Upper Ismay Mound 5550 - 5579

CONFIDENTIAL

25. WAS DIRECTIONAL SURVEY MADE: Yes

26. TYPE ELECTRIC AND OTHER LOGS RUN: FMI/GR; GR-CNL-LDT; GR-BHCS; PE Microlog; PE Array Ind.; CBL — PE LITHOLOGY PRESENTATION 9-25-96

27. WAS WELL CORED: Yes

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13 3/8"	48#	81'	15"	100 sks.	None
8 5/8"	24#	1679'	12 1/4"	915 sks. (Inc. 1")	"
5 1/2"	15.5#	5871'	7 7/8"	575 sks.	"

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	5566'	

31. PERFORATION RECORD (Interval, size and number)
5587 - 5601 - 56 holes - 4'ft. Cement Squeezed off.
5568 - 79' - 44 holes 34 gr. jets Type 37J
5550 - 58' - 32 holes " "

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
5568 - 79	12 Bbls. 15% HCl
5550 - 58	77 Bbls. 28% HCl

33.* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)	WELL STATUS (Producing or shut-in)
3-11-97	Pumping	Producing

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD →	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
3-24-97	24			41	169	107	4121

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE →	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
90	199		41	169	107	≈ 45

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.): Sold

TEST WITNESSED BY: Pumper

35. LIST OF ATTACHMENTS: Directional survey and Core data

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Edward W. McIlnay TITLE McIlnay & Associates Inc. Consulting Engineers DATE 4-9-97

*(See Instructions and Spaces for Additional Data on Reverse Side)

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.
			DST #1 -- Upper Ismay 5522 - 67' DST #2 - Ismay 5564 - 5629' DST reports submitted separately Core #1 - Upper Ismay 5507 - 67' Recovered 60.5' Core #2 - Lower Ismay 5567 - 5628 Recovered 51' See attached core descriptions.

38. GEOLOGIC MARKERS

NAME	TOP	
	MEAS. DEPTH	TRUE VERT. DEPTH
Tops		
Honaker Trail	4432'	
LaSal	5192'	
Paradox Shale	5474'	
Upper Isamy	5499'	
U. Ismay Anhy.	5529'	
U. Ismay Carb.	5535'	
Hovenweep Sh.	5623'	
Lower Ismay	5669'	
L. Ismay Anhy.	5687'	
L. Ismay Carb.	5710'	
Gothic Shale	5721'	
U. Desert Creek	5741'	
U. D. C. Anhy.	5743'	
U. D. C. Carb.	5766'	
Lower Desert Crk.	5774'	
L. D. C. Anhy.	5792'	
L. D. C. Carb.	5798'	
Chimney Rock Sh.	5816'	
Akah	5836'	
TD	5871'	

CONFIDENTIAL

12-Sep-1996

0 MINIMUM CURVATURE
0SURVEY CALCULATIONS

OPERATOR:PETRAL
WELL NAME:KNOCKDHU 2
UNITS:FEET

MEAS. DEPTH	DRIFT	DIRECTION QUADRANT	AZIMUTH	TVD	VERTICAL SECTION	DLS	NORTH SOUTH	EAST WEST
0.00	0.00	N00.00E	0.00	0.00	0.00	0.00	0.00N	0.00E
1885.00	1.00	S84.00W	264.00	1884.90	0.00	0.05	1.72S	16.36W
2009.00	1.00	S84.00W	264.00	2008.89	0.00	0.00	1.95S	18.51W
2133.00	0.50	N30.00W	330.00	2132.88	0.00	0.74	1.59S	19.86W
2259.00	0.75	N20.00W	340.00	2258.87	0.00	0.22	0.34S	20.42W
2383.00	1.00	N01.00W	359.00	2382.85	0.00	0.31	1.51N	20.71W
2541.00	0.25	N12.00W	348.00	2540.84	0.00	0.48	3.22N	20.81W
3070.00	0.75	S76.00E	104.00	3069.83	0.00	0.17	3.51N	17.69W
3535.00	0.75	N11.00W	349.00	3534.81	0.00	0.27	5.76N	15.32W
4037.00	0.75	N47.00E	47.00	4036.77	0.00	0.14	11.23N	13.54W
4557.00	0.75	N02.00E	2.00	4556.73	0.00	0.11	16.95N	10.93W
5058.00	1.00	N54.00E	54.00	5057.68	0.00	0.16	22.80N	7.28W
5507.00	0.75	N57.00E	57.00	5506.63	0.00	0.06	26.70N	1.65W

BOTTOM HOLE LOCATION

Closure Distance 26.75 Feet
Closure Direction N03.53W
Closure Azimuth 356.47 Degrees

PETRAL EXPLORATION
 # 2 Knockdhu Unit
SE NW SE Section 33 T37S R25E
San Juan County, Utah
API 43-037-31779 KB 5437

Core # 1 5507.0-5567.0 Upper Ismay Cut 60.5 Recover 60.5

5507.0-5513.0 (6.0') Shale and limestone, medium - dark gray, limey, massive, grading to argillaceous limestone. Rubbilized at basal contact. Horizontal burrow traces.

5513.0-5516.8 (3.8') Anhydrite, light - medium gray brown, limey, massive, chicken wire fabric, abundant medium - dark gray churning at base.

5516.8-5520.8 (4.0') Limestone, light - medium gray, massive, brachiopods, fossil fragments, burrowed.

5520.8-5522.6 (1.8') Anhydrite, white, mottled, with gray shale, massive, compaction deformation.

5522.6-5536.8 (14.2') Limestone, light-medium gray brown, massive, burrowed, poker chip in part, horizontal depositional laminations.

5536.8-5540.0 (3.2') Anhydrite, white, mottled gray, large chicken wire fabric.

5540.0-5555.2 (15.2') Limestone, white, light-medium gray, argillaceous banding, massive, fossil fragments and shell debris, burrowed.

5555.2-5561.0 (5.8') Limestone, light-medium gray, occasional dark gray, abundant anhydrite mottling and blebs, stylolitic (amplitude ½"), massive, dolomite banding

5561.0-5567.5 (6.5') Limestone, light-medium brown, massive, algal fabric, strong hydrocarbon odor.

PETRAL EXPLORATION
 # 2 Knockdhu Unit
SE NW SE Section 33, T37S-R25E
San Juan Co., Utah
43-037-31779-0000 KB 5437

CORE # 2 5567.0-5628.0 Upper Ismay Cut 62 ft Recovered 61 ft

5567.0-5574.5 (7.5') **LIMESTONE**, light gray to light blue gray, mottled, scattered anhydrite blebs, occasional surface voids (?), pinpoint algal fabric, burrowed.

5574.5-5577.7 (3.2') **DOLOMITE**, light-medium dark gray, anhydrite blebs, stylolitic (amplitude ¼" to ½"), massive, argillaceous.

5577.7-5580.0 (2.3') **DOLOMITE**, light-medium gray brown, anhydrite blebs, argillaceous.

5580.0-5589.5 (9.5') **DOLOMITE**, light-medium gray brown, mottled, color banded, anhydrite blebs, burrowed, many depositional laminations.

5589.5-5592.5 (3.0') **LIMESTONE**, light gray, minor anhydrite blebs, stylolites with calcite infill, surface voids and pin points, mottled with freckled appearance.

5592.5-5598.3 (5.8') **DOLOMITE**, medium-dark gray brown, massive, small anhydrite blebs, horizontal worm burrows.

5598.3-5606.3 (8.0') **LIMESTONE**, light gray, massive, fine chicken wire depositional laminations, occasional pin point and surface voids, stylolitic at basal contact.

5606.3-5610.0 (3.7') **LIMESTONE**, as above, mottled with ¼" freckles of algal debris.

5610.0-5611.3 (1.3') **DOLOMITE**, medium-dark gray brown, anhydrite blebs, ½" pyrobitumen filled stylolite at basal contact.

5611.3-5618.2 (7.1') **LIMESTONE**, light-medium gray, massive, , wavy depositional laminations, anhydrite, fossil fragments, fusilinids, crinoids, small shell fragments, small amplitude stylolites, argillaceous banding.

5618.2-5628.0 (9.8') **LIMESTONE**, light gray, massive, scattered ¼" stylolites, occasional white calcite blebs, wavey depositional laminations with associated argillaceous banding, abundant small shell fragments, grainstone appearance.

Michael O. Leavitt
Governor
Ted Stewart
Executive Director
James W. Carter
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
801-538-5340
801-359-3940 (Fax)
801-538-7223 (TDD)

Jane -
Copy attached
Jason

CONFIDENTIAL

April 18, 1997

Mr. Edward W. McIlnay
Petral Exploration, LLC
% McIlnay & Associates, Inc.
2305 Oxford Lane
Casper, Wyoming 82604

Re: Knockdhu #2, API No. 43-037-31779
Submittal of Electric and Radioactivity Logs

Dear Mr. McIlnay

We have received the Platform Express Lithology Presentation, Platform Express Neutron and Density, Platform Express Array Induction, Platform Express Microlog, Borehole Compensated Sonic w/ Gamma Ray and Formation Micro-imager Log Quality Dip Presentation logs for the above referenced well. The Well Completion Report indicates that **a CBL** log was also run. Please submit a copy of this log to our office as soon as possible.

Your help in this matter will be greatly appreciated. If you have questions regarding this request, please contact me at (801) 538-5279.

Sincerely,

Vicky Dyson

Vicky Dyson
Production Group Supervisor

cc: D. T. Staley
Log File

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING

ENTITY ACTION FORM - FORM 6

OPERATOR PETRAL EXPLORATION LLC

OPERATOR ACCT. NO. N 7700

ADDRESS _____

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION QQ	SC	TP	RG	COUNTY	SPUD DATE	EFFECTIVE DATE
D	11890	12111	43-037-31779	KNOCKDHU UNIT 2	NWSE	33	37S	25E	SAN JUAN	8-31-96	5-16-96

WELL 1 COMMENTS: *UNIT P.A. (ISMAY "A") ESTABLISHED FOR KNOCKDHU 1/43-037-31773;ENTITY 11890. NEW #12111 SET UP FOR THE KNOCKDHU 2/NON P.A.

WELL 2 COMMENTS:

WELL 3 COMMENTS:

WELL 4 COMMENTS:

WELL 5 COMMENTS:

ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

(3/89)

L. CORDOVA (DOGM)
Signature

ADMIN. ANALYST
Title

5-5-97
Date

Phone No. (____) _____

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

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Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well
   [XX] Oil Well [ ] Gas Well [ ] Other

CONFIDENTIAL

2. Name of Operator
   Petral Exploration, LLC
3. Address and Telephone No. c/o McIlnay & Associates, Inc. 2305 Oxford Lane, Casper, WY 82640 (307) 265-4351
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
   (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

5. Lease Designation and Serial No.
   UTU-065915
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7. If Unit or CA, Agreement Designation
   Knockdhu Unit 75040X
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   2
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   43-037-31779
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    Unnamed
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    San Juan Co., UT

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[XX] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[XX] Other Dispose of Prod. Water	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

It is proposed to dispose of produced water from this well by trucking from the well site to the Taos Federal #25-34 (NE, SW, SE Sec. 25-T37S-R24E, Lease U-36490, San Juan Co., UT) water injection well, which is operated by Yates Petroleum Corp. Petral Exploration, LLC ownes a Working Interest in this well.

The produced water will be injected into the Ismay Formation. The Taos Federal #25-34 has been permitted as a water disposal well with the BLM and the State of Utah, Natural Resources Oil, Gas & Mining.

Included with this Sundry are water analyses reports.

Accepted by the State
of Utah Division of
Oil, Gas and Mining
Date: 9/16/97
By:

RECEIVED
SEP 10 1997
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Donald E. McIlnay Title McIlnay & Associates, Inc. Consulting Engineers Date 9-5-97

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any: Federal Approval of this Action is Necessary

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

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FAX (406) 252-6069 • 1-800-735-4489

Company : McInay & Associates	Date : 08/14/97
Field :	Location : KNOCKDHU #2
County :	Formation :
Lab ID : 97-47544	
Comment : Petral Exploration. LLC	
Description : Light tan turbid sample with colorless clear filtrate	

Energy Laboratories, Inc. Water Analysis Report

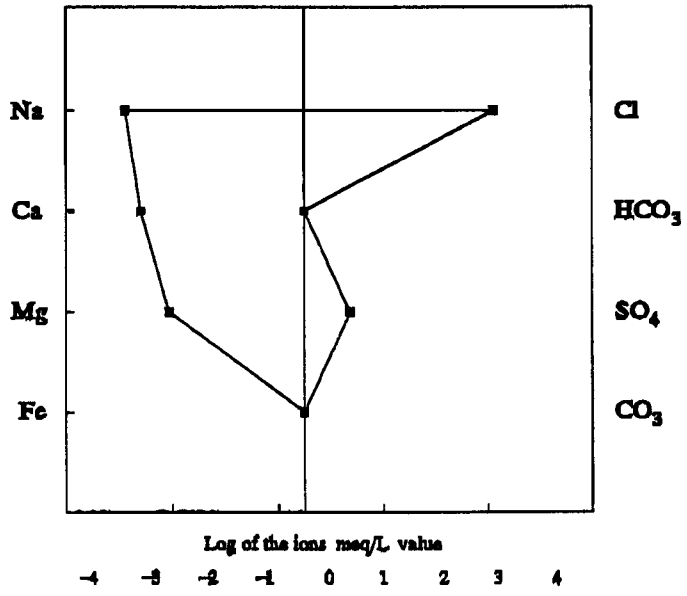
CATIONS	mg/l	meq/l	ANIONS	mg/l	meq/l
Potassium	1,340.0	34.27	Sulfate	360.0	7.50
Sodium	55,700.0	2,422.81	Chloride	144,000.0	4,061.75
Calcium	24,400.0	1,217.63	Carbonate	0.0	0.00
Magnesium	4,300.0	353.84	Bicarbonate	52.0	0.85
Iron	nd	nd	Hydroxide	0.0	0.00
Barium	nd	nd	-	-	-
Strontium	nd	nd	-	-	-
SUM +	85,740.0	4,028.55	SUM -	144,412.0	4,070.10

Solids		Sample Conditions	
Total Solids Calculated	230,000 mg/l	Temperature, °F	81 °F
Total Solids, NaCl equivalents	228,598 mg/l	pH, s.u.	5.80 s.u.
Chloride as NaCl	237,379 mg/l	Ionic Strength	4.84 μ
NaCl % of Total Dissolved Solids	62 %	Accuracy	0.66 Sigma

Other Properties			
Calcium Hardness as $CaCO_3$	60,922.7 mg/l	Specific Gravity	1.001 measured
Magnesium Hardness as $CaCO_3$	17,704.3 mg/l	Specific Gravity	1.150 calculated
Total Hardness as $CaCO_3$	78,627.0 mg/l	Resistivity, 68 F	0.054 ohm meter

Microbiological		Scaling Conditions	
Sulfate Reducing Bacteria	nd	$CaCO_3$: +	$CaSO_4$: -
		$BaSO_4$: -	$SrSO_4$: -

Water Analysis Pattern



Probable Mineral Residue, Dry

Calculation error 0 %

Compound	mg/l
NaCl	141,595
$CaCl_2$	67,105
$MgCl_2$	16,844
KCl	2,555
$CaSO_4$	510
$Ca(HCO_3)_2$	69

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NOTE: nd indicates not determined

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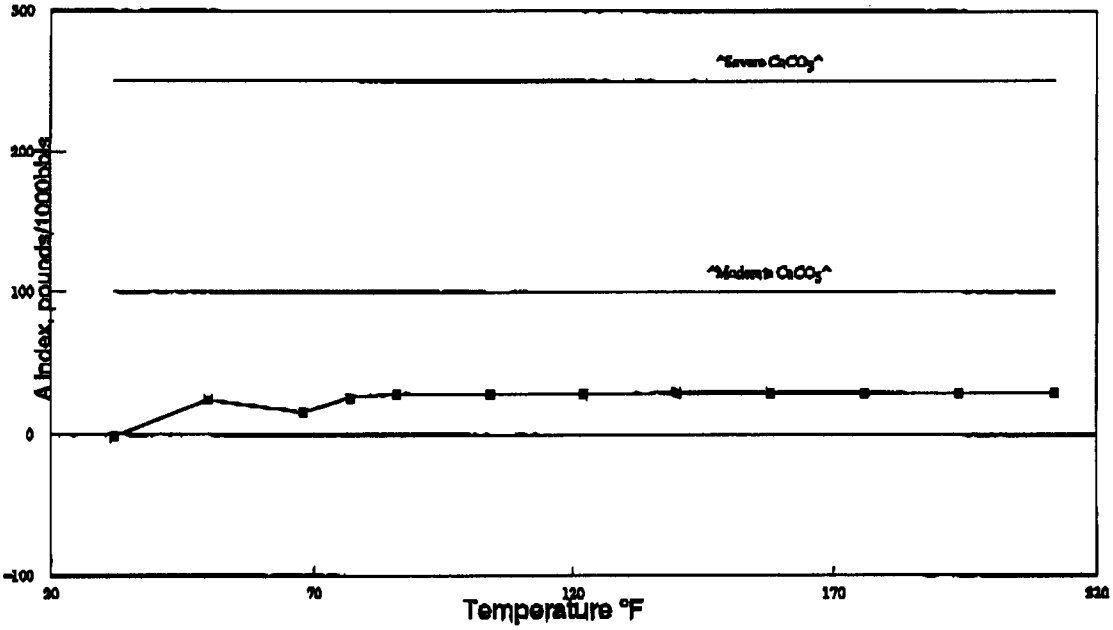
Company: McIlnay & Associates	Date : 08/14/97
Field :	Location : KNOCKDHU #2
County :	Formation :
Lab ID : 97-47544	
Comment : Petral Exploration. LLC	
Description : Light tan turbid sample with colorless clear filtrate	

Energy Laboratories, Inc. Stiff–Davis Report

Calcium Carbonate Scale Precipitation Calculations

Temperature C	Temperature F	Stiff-Davis Index	Aggressivity Index
0	32	-0.02	-1
10	50	0.79	25
20	68	0.33	16
25	77	0.94	26
30	86	1.54	29
40	104	1.36	29
50	122	1.76 •	29 •
60	140	0.00	30
70	158	0.00	30
80	176	0.00	30



Scale calculation parameters	Temperatures
pH : 5.80 s.u.	Surface temperature : 81 °F
Ionic Strength : 4.839 μ	Downhole temperature : 130 °F

NOTE: Stiff Davis Index	NOTE: A Index: Assumes 100% precipitation lbs/1000bbls
– Undersaturation, scale negative.	– A Index > 0–100 Slight scaling.
0 Saturation point, scale unlikely.	– A Index > 100–250 Moderate scaling.
+ Supersaturation, scaling condition.	– A Index > 250 + Severe scaling.

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Company : McIlnay & Associates	Date : 08/14/97
Field :	Location : TAUS FED #25-34 SWD
County :	Formation :
Lab ID : 97-47547	
Comment : Petral Exploration, LLC	
Description : Light tan turbid sample with colorless clear filtrate	

Energy Laboratories, Inc. Water Analysis Report

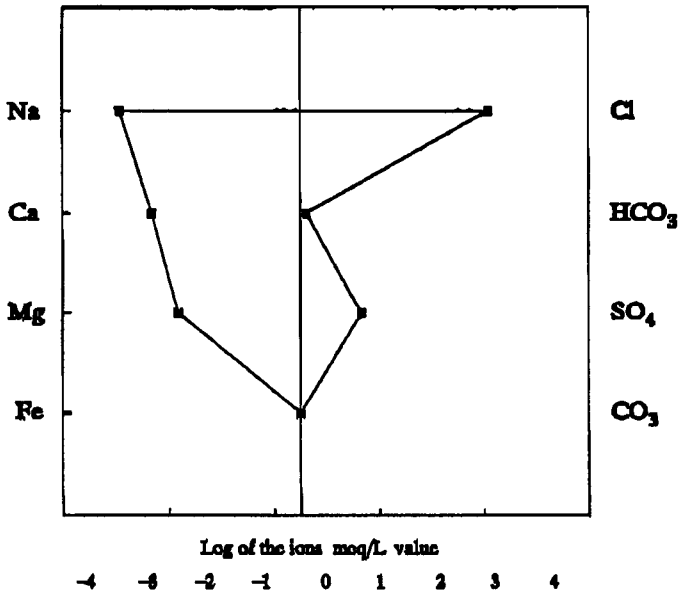
CATIONS	mg/l	meq/l	ANIONS	mg/l	meq/l
Potassium	1,630.0	41.69	Sulfate	682.0	14.20
Sodium	61,400.0	2,670.75	Chloride	134,000.0	3,779.68
Calcium	13,000.0	648.73	Carbonate	0.0	0.00
Magnesium	2,530.0	208.19	Bicarbonate	78.0	1.28
Iron	nd	nd	Hydroxide	0.0	0.00
Barium	nd	nd	–	–	–
Strontium	nd	nd	–	–	–
SUM +	78,560.0	3,569.36	SUM –	134,760.0	3,795.16

Solids		Sample Conditions	
Total Solids Calculated	214,000 mg/l	Temperature, °F	81 °F
Total Solids, NaCl equivalents	211,298 mg/l	pH, s.u.	6.40 s.u.
Chloride as NaCl	220,894 mg/l	Ionic Strength	4.12 μ
NaCl % of Total Dissolved Solids	73 %	Accuracy	3.83 Sigma

Other Properties			
Calcium Hardness as $CaCO_3$	32,458.8 mg/l	Specific Gravity	1.001 measured
Magnesium Hardness as $CaCO_3$	10,416.2 mg/l	Specific Gravity	1.139 calculated
Total Hardness as $CaCO_3$	42,875.0 mg/l	Resistivity, 68 F	0.053 ohm meter

Microbiological		Scaling Conditions	
Sulfate Reducing Bacteria	nd	$CaCO_3$: +	$CaSO_4$: –
		$BaSO_4$: –	$SrSO_4$: –

Water Analysis Pattern



Probable Mineral Residue, Dry

Calculation error 0 %

Compound	mg/l
NaCl	156,085
$CaCl_2$	35,140
$MgCl_2$	9,911
KCl	3,108
$CaSO_4$	967
$Ca(HCO_3)_2$	104

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NOTE: nd indicates not determined

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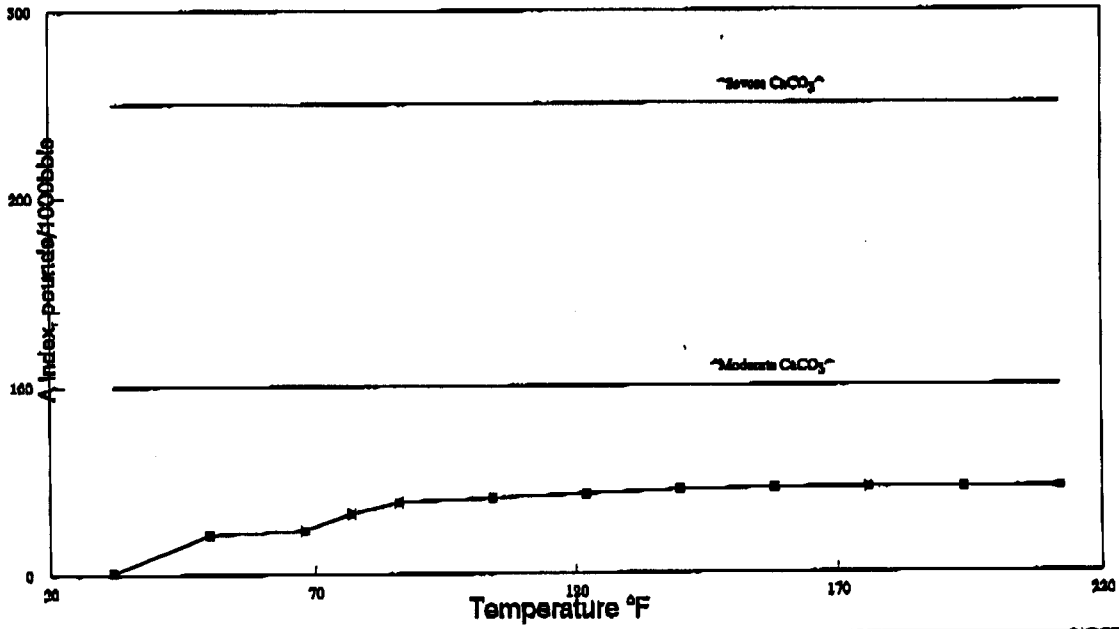
Company: McIlnay & Associates	Date : 08/14/97
Field :	Location : TAUS FED #25-84 SWD
County :	Formation :
Lab ID : 97-47547	
Comment : Petral Exploration, LLC	
Description : Light tan turbid sample with colorless clear filtrate	

Energy Laboratories, Inc. Stiff–Davis Report

Calcium Carbonate Scale Precipitation Calculations

Temperature C	Temperature F	Stiff-Davis Index	Aggressivity Index
0	32	0.01	1
10	50	0.28	21
20	68	0.33	23
25	77	0.54	32
30	86	0.79	38
40	104	0.95	40
50	122	1.29 •	42 •
60	140	1.94	44
70	158	2.42	45
80	176	2.96	45



Scale calculation parameters	Temperatures
pH : 6.40 s.u.	Surface temperature : 81 °F
Ionic Strength : 4.118 μ	Downhole temperature : 130 °F

NOTE: Stiff Davis Index	NOTE: A Index: Assumes 100% precipitation lbs/1000bbls
– Undersaturation, scale negative.	– A Index > 0–100 Slight scaling.
0 Saturation point, scale unlikely.	– A Index > 100–250 Moderate scaling.
+ Supersaturation, scaling condition.	– A Index > 250 + Severe scaling.

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Company : McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 1	
Comment : Petral Exploration, LLC	
15% ~~ROCKIES~~ #2 RDH + 85% TAUS FED #25-84 SWD	
Description : Recharge	

Energy Laboratories, Inc. Water Analysis Report

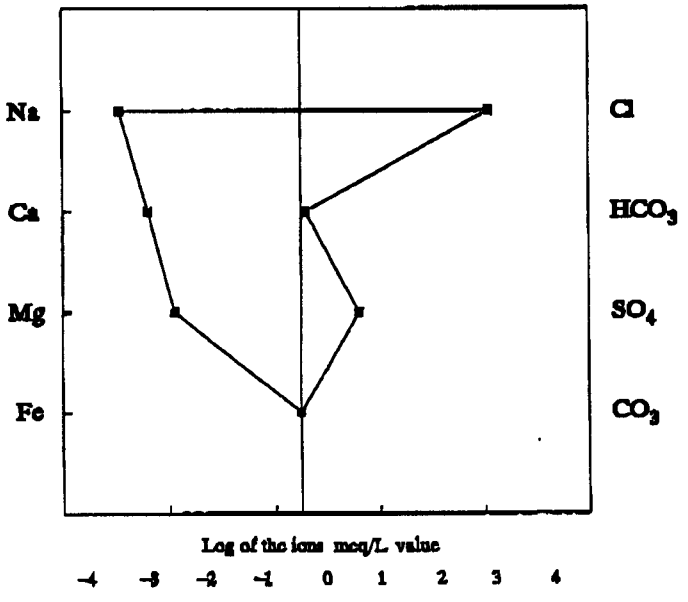
CATIONS	mg/l	meq/l	ANIONS	mg/l	meq/l
Potassium	1,634.5	41.80	Sulfate	629.5	13.11
Sodium	61,460.0	2,673.36	Chloride	137,300.0	3,872.77
Calcium	15,475.0	772.24	Carbonate	0.0	0.00
Magnesium	2,954.5	243.12	Bicarbonate	74.4	1.22
Iron	nd	nd	Hydroxide	0.0	0.00
Barium	nd	nd	–	–	–
Strontium	nd	nd	–	–	–
SUM +	81,524.0	3,730.52	SUM –	138,003.9	3,887.10

Solids		Sample Conditions	
Total Solids Calculated	220,150 mg/l	Temperature, °F	81 °F
Total Solids, NaCl equivalents	217,531 mg/l	pH, s.u.	6.40 s.u.
Chloride as NaCl	226,334 mg/l	Ionic Strength	4.32 μ
NaCl % of Total Dissolved Solids	71 %	Accuracy	2.59 Sigma

Other Properties			
Calcium Hardness as $CaCO_3$	38,638.5 mg/l	Specific Gravity	1.001 measured
Magnesium Hardness as $CaCO_3$	12,164.5 mg/l	Specific Gravity	1.143 calculated
Total Hardness as $CaCO_3$	50,803.0 mg/l	Resistivity, 68 F	0.053 ohm meter

Microbiological		Scaling Conditions	
Sulfate Reducing Bacteria	nd	$CaCO_3$: +	$CaSO_4$: –
		$BaSO_4$: –	$SrSO_4$: –

Water Analysis Pattern



Probable Mineral Residue, Dry

Calculation error 0 %	
Compound	mg/l
NaCl	156,238
$CaCl_2$	42,058
$MgCl_2$	11,574
KCl	3,117
$CaSO_4$	892
$Ca(HCO_3)_2$	99

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NOTE: nd indicates not determined

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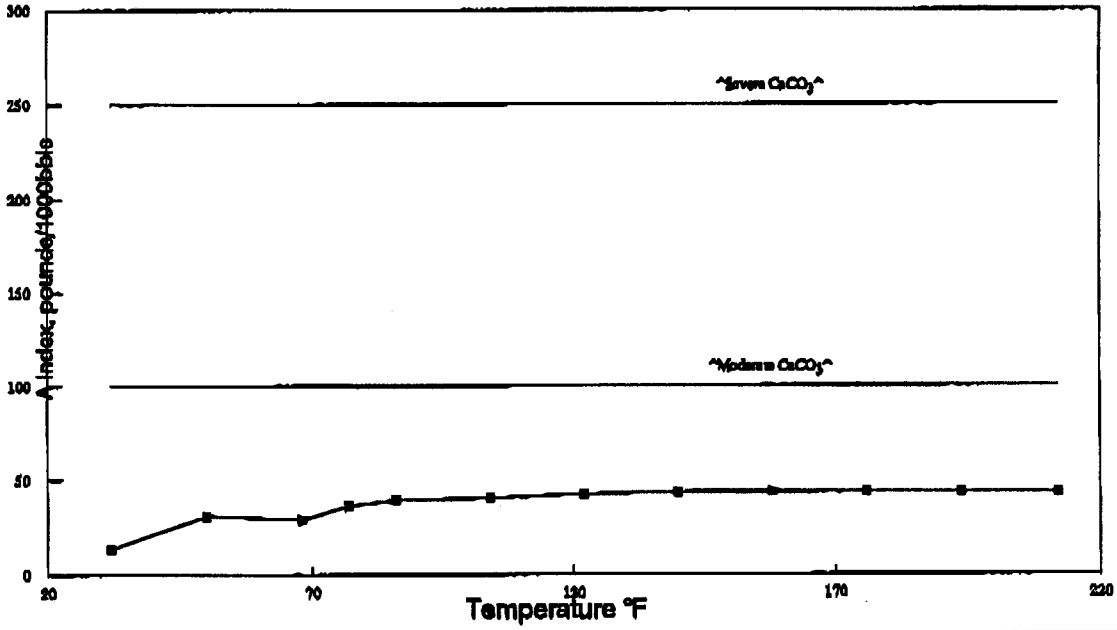
Company: McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 1	
Comment : Petral Exploration. LLC	
15% ~~KNOCKDHU #2 RDH~~ + 85% TAUS FED #25-34 SWD	
Description : Knockando #2 RDH	

Energy Laboratories, Inc. Stiff–Davis Report

Calcium Carbonate Scale Precipitation Calculations

Temperature C	Temperature F	Stiff-Davis Index	Aggressivity Index
0	32	0.17	14
10	50	0.54	31
20	68	0.49	29
25	77	0.78	36
30	86	1.11	39
40	104	1.20	40
50	122	1.56 •	42 •
60	140	2.39	43
70	158	2.93	43
80	176	0.00	43



Scale calculation parameters	Temperatures
pH : 6.40 s.u.	Surface temperature : 81 °F
Ionic Strength : 4.323 μ	Downhole temperature : 130 °F

NOTE: Stiff Davis Index	NOTE: A Index; Assumes 100% precipitation lbs/1000bbls
– Undersaturation, scale negative.	– A Index > 0–100 Slight scaling.
0 Saturation point, scale unlikely.	– A Index > 100–250 Moderate scaling.
+ Supersaturation, scaling condition.	– A Index > 250 + Severe scaling.

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Company : McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 2	
Comment : Petral Exploration. LLC	
5% KNOCKDHU #3 + 95% TAUS FED #24-34 SWD	
Description :	

Energy Laboratories, Inc. Water Analysis Report

CATIONS	mg/l	meq/l	ANIONS	mg/l	meq/l
Potassium	1,613.0	41.25	Sulfate	773.4	16.11
Sodium	60,695.0	2,640.08	Chloride	133,750.0	3,772.63
Calcium	13,460.0	671.69	Carbonate	0.0	0.00
Magnesium	2,579.0	212.22	Bicarbonate	74.4	1.22
Iron	nd	nd	Hydroxide	0.0	0.00
Barium	nd	nd	–	–	–
Strontium	nd	nd	–	–	–
SUM +	78,347.0	3,565.24	SUM –	134,597.8	3,789.96

Solids

Total Solids Calculated	213,600 mg/l
Total Solids, NaCl equivalents	210,897 mg/l
Chloride as NaCl	220,482 mg/l
NaCl % of Total Dissolved Solids	72 %

Sample Conditions

Temperature, °F	81 °F
pH, s.u.	6.40 s.u.
Ionic Strength	4.13 μ
Accuracy	3.82 Sigma

Other Properties

Calcium Hardness as $CaCO_3$	33,607.3 mg/l
Magnesium Hardness as $CaCO_3$	10,618.7 mg/l
Total Hardness as $CaCO_3$	44,226.0 mg/l

Specific Gravity	1.001 measured
Specific Gravity	1.139 calculated
Resistivity, 68 F	0.053 ohm meter

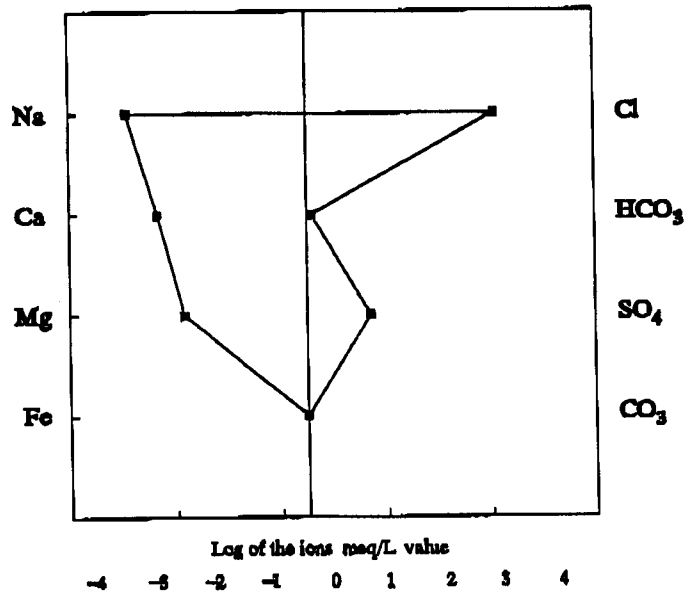
Microbiological

Sulfate Reducing Bacteria	nd

Scaling Conditions

$CaCO_3$: + $CaSO_4$: –
$BaSO_4$: – $SrSO_4$: –

Water Analysis Pattern



Probable Mineral Residue, Dry

Calculation error 0 %

Compound	mg/l
NaCl	154,293
$CaCl_2$	36,312
$MgCl_2$	10,103
KCl	3,076
$CaSO_4$	1,096
$Ca(HCO_3)_2$	99

08/29/97

NOTE: nd indicates not determined

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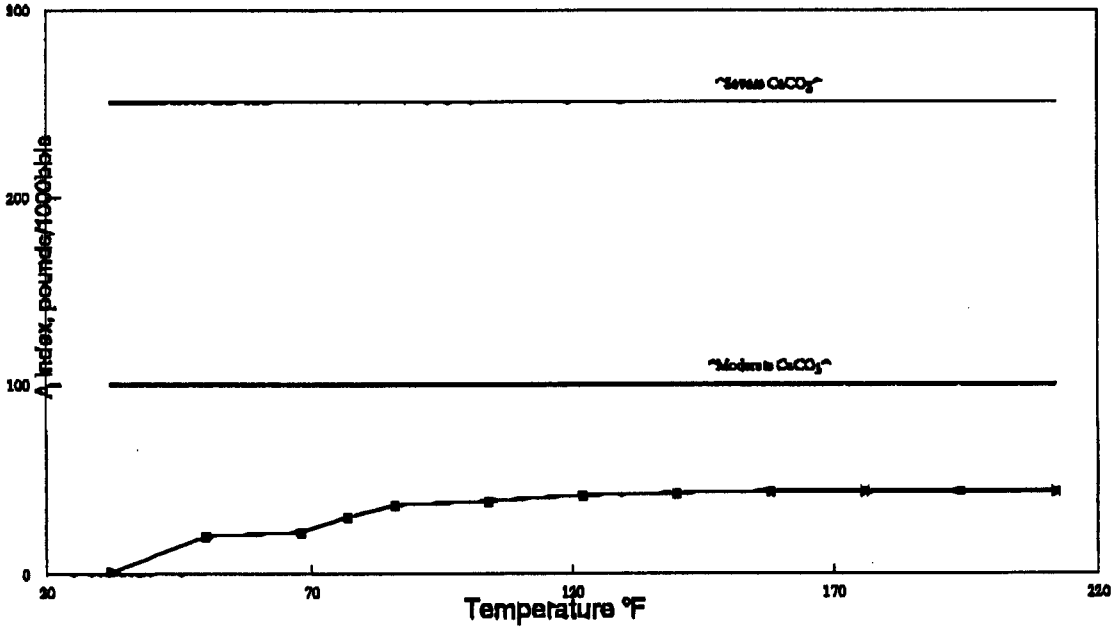
Company: McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 2	
Comment : Petral Exploration. LLC	
5% KNOCKDHU #3 + 95% TAUS FED #24-84 SWD	
Description :	

Energy Laboratories, Inc. Stiff–Davis Report

Calcium Carbonate Scale Precipitation Calculations

Temperature C	Temperature F	Stiff-Davis Index	Aggressivity Index
0	32	0.00	1
10	50	0.28	20
20	68	0.32	22
25	77	0.54	30
30	86	0.79	36
40	104	0.95	38
50	122	1.29 •	41 •
60	140	1.94	42
70	158	2.43	43
80	176	2.97	43



Scale calculation parameters	Temperatures
pH : 6.40 s.u.	Surface temperature : 81 °F
Ionic Strength : 4.128 μ	Downhole temperature : 130 °F

NOTE: Stiff Davis Index	NOTE: A Index; Assumes 100% precipitation lbs/1000bbls
– Undersaturation, scale negative.	– A Index > 0–100 Slight scaling.
0 Saturation point, scale unlikely.	– A Index > 100–250 Moderate scaling.
+ Supersaturation, scaling condition.	– A Index > 250 + Severe scaling.

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Company : McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 3	
Comment : Petral Exploration. LLC	
15% KNOCKDHU #2 + 85% TAUS FED #24-84 SWD	
Description :	

Energy Laboratories, Inc. Water Analysis Report

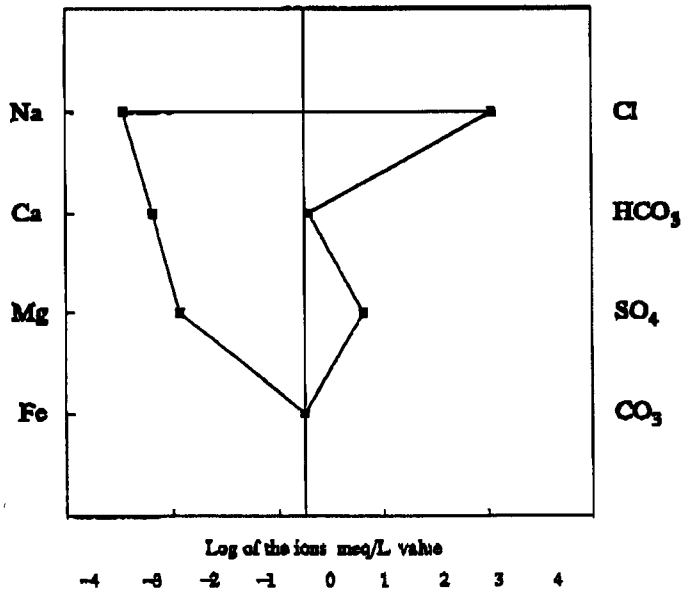
CATIONS	mg/l	meq/l	ANIONS	mg/l	meq/l
Potassium	1,586.5	40.58	Sulfate	633.7	13.20
Sodium	60,545.0	2,633.56	Chloride	135,500.0	3,821.99
Calcium	14,710.0	734.07	Carbonate	0.0	0.00
Magnesium	2,795.5	230.03	Bicarbonate	74.1	1.21
Iron	nd	nd	Hydroxide	0.0	0.00
Barium	nd	nd	–	–	–
Strontium	nd	nd	–	–	–
SUM +	79,637.0	3,638.24	SUM –	136,207.8	3,836.40

Solids		Sample Conditions	
Total Solids Calculated	216,400 mg/l	Temperature, °F	81 °F
Total Solids, NaCl equivalents	213,894 mg/l	pH, s.u.	6.30 s.u.
Chloride as NaCl	223,367 mg/l	Ionic Strength	4.23 μ
NaCl % of Total Dissolved Solids	71 %	Accuracy	3.33 Sigma

Other Properties			
Calcium Hardness as $CaCO_3$	36,728.4 mg/l	Specific Gravity	1.001 measured
Magnesium Hardness as $CaCO_3$	11,509.6 mg/l	Specific Gravity	1.141 calculated
Total Hardness as $CaCO_3$	48,238.0 mg/l	Resistivity, 68 F	0.053 ohm meter

Microbiological		Scaling Conditions	
Sulfate Reducing Bacteria	nd	$CaCO_3$: +	$CaSO_4$: –
		$BaSO_4$: –	$SrSO_4$: –

Water Analysis Pattern



Probable Mineral Residue, Dry

Calculation error 0 %

Compound	mg/l
NaCl	153,912
$CaCl_2$	39,935
$MgCl_2$	10,951
KCl	3,025
$CaSO_4$	898
$Ca(HCO_3)_2$	98

08/29/97

NOTE: nd indicates not determined

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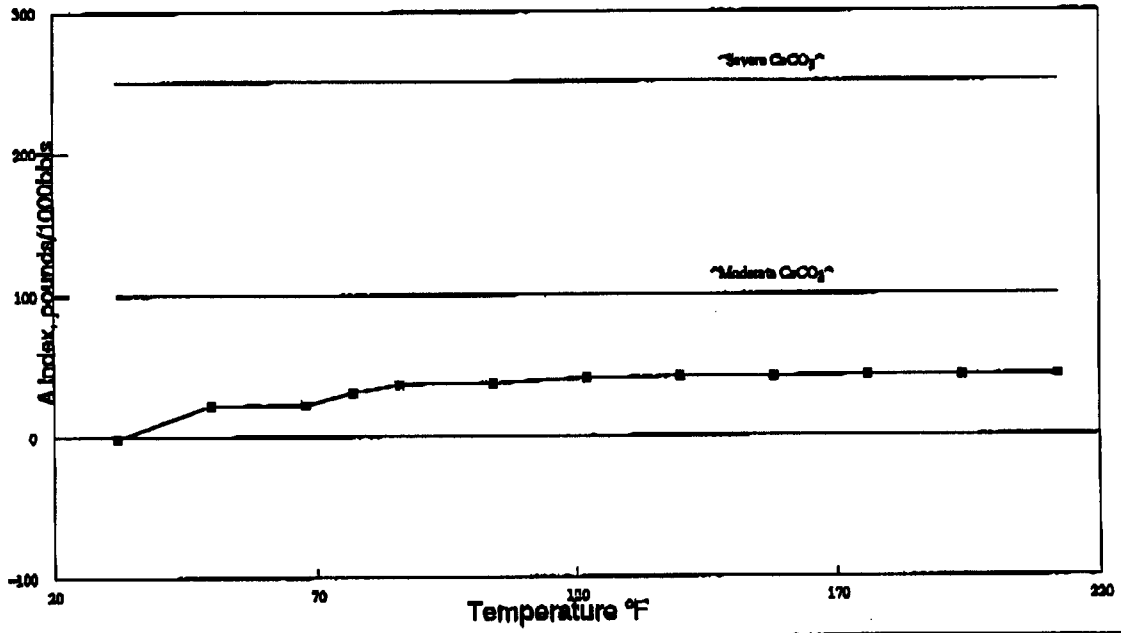
Company: McInnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 3	
Comment : Petral Exploration. LLC	
15% KNOCKDHU #2 + 85% TAUS FED #24-34 SWD	
Description :	

Energy Laboratories, Inc. Stiff – Davis Report

Calcium Carbonate Scale Precipitation Calculations

Temperature C	Temperature F	Stiff-Davis Index	Aggressivity Index
0	32	-0.01	-1
10	50	0.32	22
20	68	0.31	22
25	77	0.57	31
30	86	0.85	37
40	104	0.98	38
50	122	1.33 •	41 •
60	140	2.07	42
70	158	2.58	42
80	176	0.00	43



Scale calculation parameters	Temperatures
pH : 6.30 s.u.	Surface temperature : 81 °F
Ionic Strength : 4.226 μ	Downhole temperature : 130 °F

NOTE: Stiff Davis Index	NOTE: A Index: Assumes 100% precipitation lbs/1000bbls
– Undersaturation, scale negative.	– A Index > 0–100 Slight scaling.
0 Saturation point, scale unlikely.	– A Index > 100–250 Moderate scaling.
+ Supersaturation, scaling condition.	– A Index > 250 + Severe scaling.

08/29/97

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Company : McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 4	
Comment : Petral Exploration, LLC	
~~Knockdhu~~ 15% ~~KNOCKDHU~~ #2 RDH + 5% KNOCKDHU #3	
Description : + 15% KNOCKDHU #2 + 65% TAUS FED #24-34 SWD	

Energy Laboratories, Inc. Water Analysis Report

CATIONS	mg/l	meq/l	ANIONS	mg/l	meq/l
Potassium	1,574.0	40.26	Sulfate	672.6	14.01
Sodium	59,900.0	2,605.50	Chloride	138,550.0	3,908.02
Calcium	17,645.0	880.53	Carbonate	0.0	0.00
Magnesium	3,269.0	269.00	Bicarbonate	66.9	1.10
Iron	nd	nd	Hydroxide	0.0	0.00
Barium	nd	nd	-	-	-
Strontium	nd	nd	-	-	-
SUM +	82,388.0	3,795.29	SUM -	139,289.5	3,923.13

Solids

Total Solids Calculated	222,150 mg/l
Total Solids, NaCl equivalents	219,723 mg/l
Chloride as NaCl	228,394 mg/l
NaCl % of Total Dissolved Solids	69 %

Sample Conditions

Temperature, °F	81 °F
pH, s.u.	6.30 s.u.
Ionic Strength	4.44 μ
Accuracy	2.10 Sigma

Other Properties

Calcium Hardness as $CaCO_3$	44,056.6 mg/l	Specific Gravity	1.001 measured
Magnesium Hardness as $CaCO_3$	13,459.4 mg/l	Specific Gravity	1.144 calculated
Total Hardness as $CaCO_3$	57,516.0 mg/l	Resistivity, 68 F	0.053 ohm meter

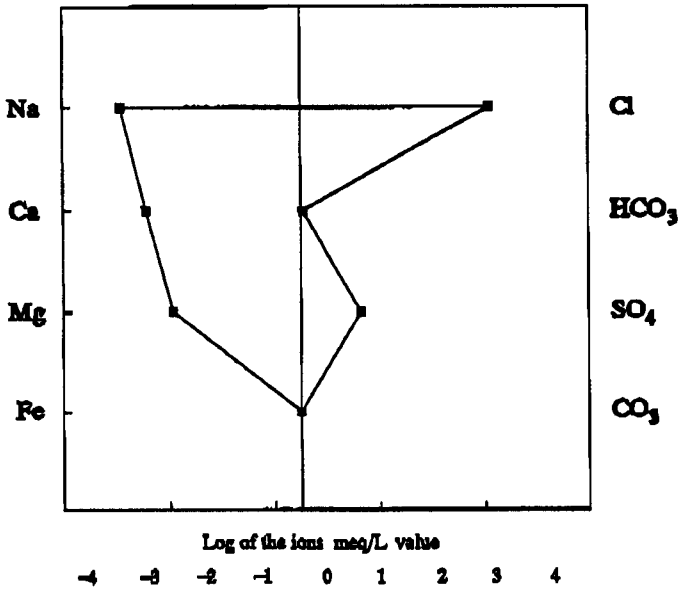
Microbiological

Sulfate Reducing Bacteria	nd

Scaling Conditions

$CaCO_3$: +	$CaSO_4$: +
$BaSO_4$: -	$SrSO_4$: -

Water Analysis Pattern



Probable Mineral Residue, Dry

Calculation error 0 %

Compound	mg/l
NaCl	152,272
$CaCl_2$	48,024
$MgCl_2$	12,806
KCl	3,001
$CaSO_4$	953
$Ca(HCO_3)_2$	89

08/29/97

NOTE: ad indicates not determined

v5.250 Michael D. Carney

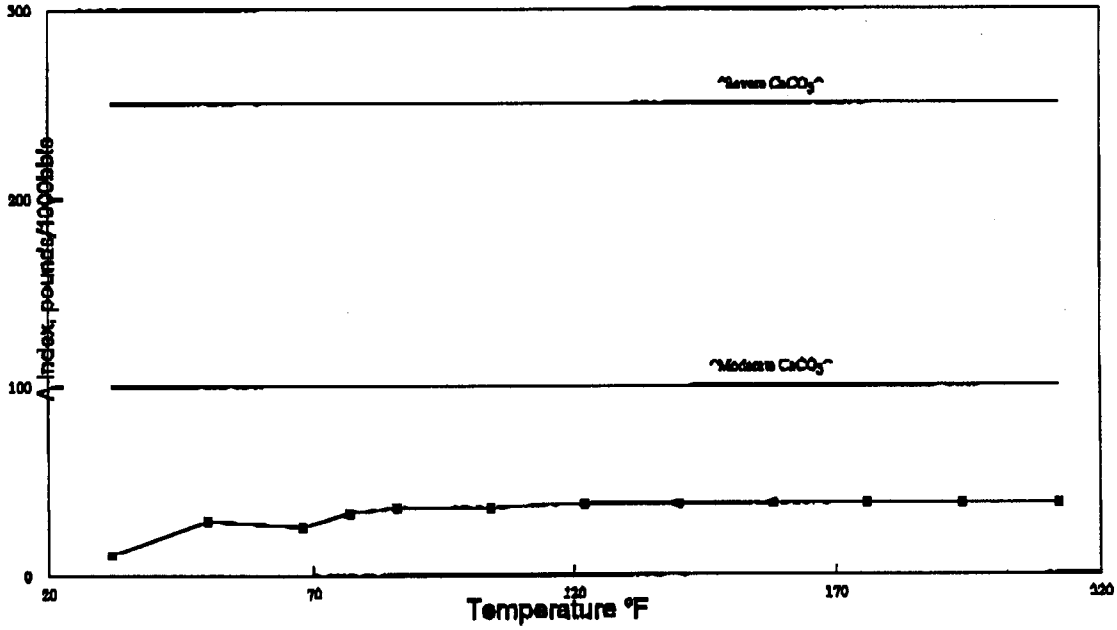
ENERGY LABORATORIES, INC.
P.O. BOX 30916 • 1120 SOUTH 27TH STREET • BILLINGS, MT 59107-0916 • PHONE (406) 252-6325
FAX (406) 252-6069 • 1-800-735-4489

Company: McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 4	
Comment : Petral Exploration, LLC - Knockouts	
15% ~~KNOCKDHU #2~~ RDH + 5% KNOCKDHU #3	
Description : + 15% KNOCKDHU #2 + 65% TAUS FED #24-34 SWD	

Energy Laboratories, Inc. Stiff–Davis Report

Calcium Carbonate Scale Precipitation Calculations

Temperature C	Temperature F	Stiff-Davis Index	Aggressivity Index
0	32	0.15	11
10	50	0.60	29
20	68	0.48	26
25	77	0.82	33
30	86	1.20	36
40	104	1.24	36
50	122	1.61 •	38 •
60	140	2.57	38
70	158	0.00	38
80	176	0.00	38



Scale calculation parameters	Temperatures
pH: 6.30 s.u.	Surface temperature : 81 °F
Ionic Strength : 4.441 μ	Downhole temperature : 130 °F

NOTE: Stiff Davis Index	NOTE: A Index; Assumes 100% precipitation lbs/1000bbls
– Undersaturation, scale negative.	– A Index > 0–100 Slight scaling.
0 Saturation point, scale unlikely.	– A Index > 100–250 Moderate scaling.
+ Supersaturation, scaling condition.	– A Index > 250 + Severe scaling.

08/29/97

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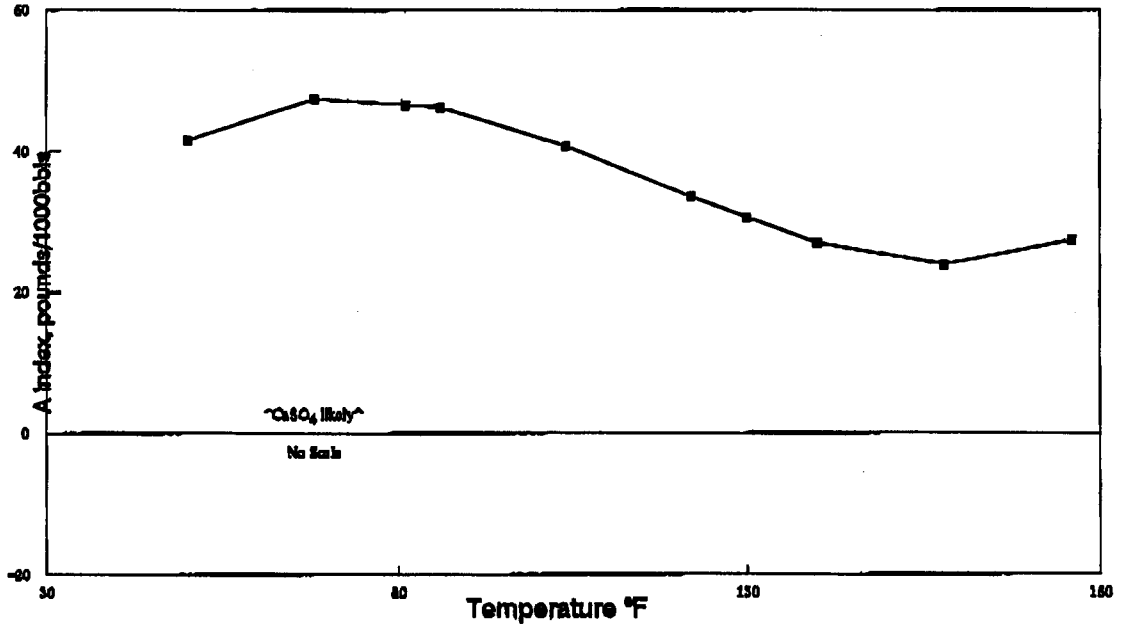
FAX (406) 252-6069 • 1-800-735-4489

Company : McIlnay & Associates	Date : 08/14/97
Field :	Location :
County :	Formation :
Lab ID : MIX 4	
Comment : Petral Exploration. LLC knockode #2 RDH	
15% ~~KNOCKDHU #2 RDH~~ + 5% KNOCKDHU #3	
Description : + 15% KNOCKDHU #2 + 65% TAUS FED #24-84 SWD	

Energy Laboratories, Inc. Skillman Method

Calcium Sulfate Scale Precipitation Calculations

Temperature C	Temperature F	SOLUBILITY Actual		Calculated		S Index	A Index
10	50	14.01	-	12.26	=	1.75	42
20	68	14.01	-	12.02	=	1.99	47
27	81	14.01	-	12.05	=	1.95	47
30	86	14.01	-	12.07	=	1.94	46
40	104	14.01	-	12.30	=	1.71	41
50	122	14.01	-	12.60	=	1.40 •	33 •
54	130	14.01	-	12.73	=	1.28 •	31 •
60	140	14.01	-	12.88	=	1.13	27
70	158	14.01	-	13.01	=	1.00	24
80	176	14.01	-	12.87	=	1.14	27



Scale calculation parameters	Temperatures
pH : 6.30 s.u.	Surface temperature : 81 °F
Ionic Strength : 4.441 μ	Downhole temperature : 130 °F

NOTE: 'S' Index	NOTE: 'A' Index; Assumes 100% precipitation lbs/1000bbls
- Undersaturation, scale negative.	- A Index <= 0 Scale formation negative.
0 Saturation point, scale unlikely.	- A Index > 0 Scale formation positive.
+ Supersaturation, scaling condition.	

 08/29/97

PETRAL EXPLORATION, LLC.

#2 KNOCKDHU UNIT

NE/NW/SE SEC. 33,T37S,R25E
SAN JUAN CO., UTAH

CONFIDENTIAL

43 037 31779
PGW

MICROFICHE

GEOLOGICAL REPORT

ON

#2 KNOCKDHU UNIT
NE/NW/SE SEC. 33,T37E,R25E

FOR

PETRAL EXPLORATION, LLC

TABLE OF CONTENTS

September, 1996 Roger D. Charbonneau, B. Sc.
Wellsite Geologist, Decollement Consulting. Inc.

WELL DATA SUMMARY

WELL NAME	#2 KNOCKDHU UNIT
OPERATOR	PETRAL EXPLORATION, LLC
SURFACE LOCATION	NE\NW\SE Sec.33, T37S,R25E
BOTTOM HOLE LOCTION	AS ABOVE
COORDINATES	1950' FSL, 1573' FEL
WELL CLASSIFICATION	Development
DRILLING CONTRACTOR	FOUR CORNERS #4
WELL LICENCE NUMBER	DTU-065915
AFE NUMBER	#2 KNOCKANDO UNIT 75040X
ELEVATIONS - GROUND LEVEL	5425'
- KELLY BUSHING	5436'
SPUD DATE	9-1-96
T.D. DATE	9-18-96
RIG RELEASE DATE	9-20-96
SURFACE CASING	1678' of 8 5/8"
INTERMEDIATE CASING	NIL
HOLE SIZE	7 7/8"
SAMPLE INTERVAL	4000' - 5871'
GAS DETECTION INTERVAL	4000' - 5871'

WELL DATA SUMMARY

OPEN HOLE LOGS	GR-S P-Induction; LDT-CNL
	GR-BHCS
	GR-FMI
DRILL STEM TESTS	#1 Upper Ismay 5525' - 5567'
	#2 Upper Ismay 5564' - 5629'
CORES NIL	#1 Upper Ismay 5507' - 5567'
	#2 Upper Ismay 5567' - 5629'
MUD TYPE	LSND
WELL STATUS	TA

FORMATION TOPS

Kelly Bushing (ft) 5436'

FORMATION	PROGNOSIS	SAMPLE TOP	E-LOG TOP	SUBSEA LOG
	(ft)	(ft)	(ft)	(ft)
Honaker Trail	4445'	4414'	4432'	1004.0
La Sal	5190'	5202'	5192'	244.0
Upper Ismay	5497'	5513'	5499'	-63
U. Ismay Mas Anh	ABSENT	5536'	5529'	-93
U. Ismay Mound	5510'	5544'	5535'	-99
Hovenweep	5605'	5633'	5623'	-187
Lower Ismay	5635'	5674'	5669'	-233
L. Ismay Anhy	5655'	5694'	5687'	-257
L. Ismay Carbonate	5682'	5717'	5710'	-274
Gothic Shale	5692'	5728'	5721'	-285
Upper Desert Creek	5698'	5745'	5741'	-305
U.D.C. Anhy	5704'	5750'	5753'	-317
Lower Desert Creek	5738'	5770'	5766'	-330
L.D.C. Anhy	5752'	5778'	5792'	-356
L.D. C. Mound	5758'	5808'	5799'	-363
Sub-Mound	5793'	5822'	5805'	-369
Chimney Rock Sh	5801'	5825'	5816'	-380
Akah	5822'	5846'	5836'	-400
T.D.	5850'	5871'	5866'	-430
Salt	5852'	5869'		

DEVIATION SURVEYS

DEPTH (ft)	SURVE (degrees)
104	3/4
193	1/2
280	1/2
368	3/4
484	1/2
664	1
753	1
875	1 1/4
998	2
1152	2
1244	1 1/4
1364	1 1/2
1461	1 1/2
1553	1 1/2
1646	1 1/2
1885	1
2009	1
2134	1/2
2257	3/4
2383	1
2541	1/4
3038	3/4
3535	3/4
4037	3/4
4526	Misrun
4557	3/4
5058	1
5467	3/4
5871	3/4

BIT RECORD

WELL NAME: #2 KNOCKDHU UNIT
LOCATION: NE\NW\SE Sec.33,T37S,R25E
SURFACE CASING: 1678' of 8 5/8"
SPUD DATE: 9-1-96
T.D. DATE: 9-18-96

BIT #	1	2	3	4	5	6	7	8
SIZE (in)	17 1/2"	12 1/4"	12 1/4"	7 7/8"	7 7/8"	7 7/8"	7 27/32	7 7/8
MAKE	Sec.	Reed	Reed	Reed	Reed	Reed	Hughs	Smith
TYPE	S-35	HP-51	HP-51	HP-51X	HP-53P	HP-53A	ARC-325	F-3H
SERIAL #	RT	H42488	RR	R10933	T41318	T41318	1900309	LH 3316
JETS	2x14	2x15	2x15	2x12	2x13	2x13	nil	2x13
	1x15	1x14	1x14	blank	blank	blank	nil	blank
OUT AT	85'	1599'	1678'	3078'	5098'	5507'	5629'	5871'
FOOTAGE	85'	1514'	79'	1379'	2023'	409'	122'	242'
HOURS	7	29 1/2	3	29 1/2	47 1/2	22 1/2	8	26 3/4
ACC. HRS.	7	36 1/2	39 1/2	69	116	139	147	165 3/4
WT.	all	40	32	40	40	40	40	40
RPM	120	80	80	75	75	75	70	75
PP	400	500	1100	1550	1800	1550	1550	2000
MUD WT	water	water	water	water	water	9.3	9.4	10.9
VIS						46	32	60
VER. DEV.	Nil	1 1/2	1 1/2	3/4	3/4	3/4	3/4	3/4
	TBG	T B G	T B G	T B G	T B G	T B G	TBG	TBG
COND.								
REMARKS								

DRILL STEM TEST REPORT

Well Name and Location:	#2 KNOCKDHU UNIT
Test Number and Interval:	DST #1 5525' - 5567'
Date:	8-14-96
Formation:	Upper Ismay
Test Type:	Bottom Hole Conventional
Hole Size:	7 7/8"
Testing Company:	Baker

Mud Properties

Mud Weight:	9.5	Viscosity:	44
pH	9.5	Water Loss:	9
Water Cushion	Non		

Times and Pressures

Time and Date Tool Opened: 9-13-96

	Time (min)	Pressure (psi)
I.H.		2809
PREFLOW	30	83-93
I.S.I.	120	1763
F.F.	240	67-94
F.S.I.	960	2145
F.H.		2792

Bottom Hole Temperature (degrees F) 131

Recovery and Description

Preflow Description:	Start flow-B.O.B. @ 70 seconds, 10.2 lbs. in 30 sec. increasing to 12.8lbs in 30 min. tool shut in.
Valve Open Description:	Start of flow, open tool at 3lbs psi incr. to 16 lbs in 5 min. incr to 16 lbs in 5 min. decr to 2.9lbs in 4 hrs
Fluid Recovery:	80' gas cut mud; 203' gas cut mud with trace of oil
Sampler:	.37 cf of gas: 200 cc mud Mud filtrate .339 @ 60
Salinity:	22000 ppm

DRILL STEM TEST REPORT

Well Name and Location:	#2 KNOCKDHU UNIT
Test Number and Interval:	DST #2 5564' - 5629'
Date:	9-15-96
Formation:	Upper Ismay
Test Type:	Bottom Hole Conventional
Hole Size:	7 7/8"
Testing Company:	Baker

Mud Properties

Mud Weight:	9.7	Viscosity:	45
pH	9.5	Water Loss:	9
Water Cushion	Non		

Times and Pressures

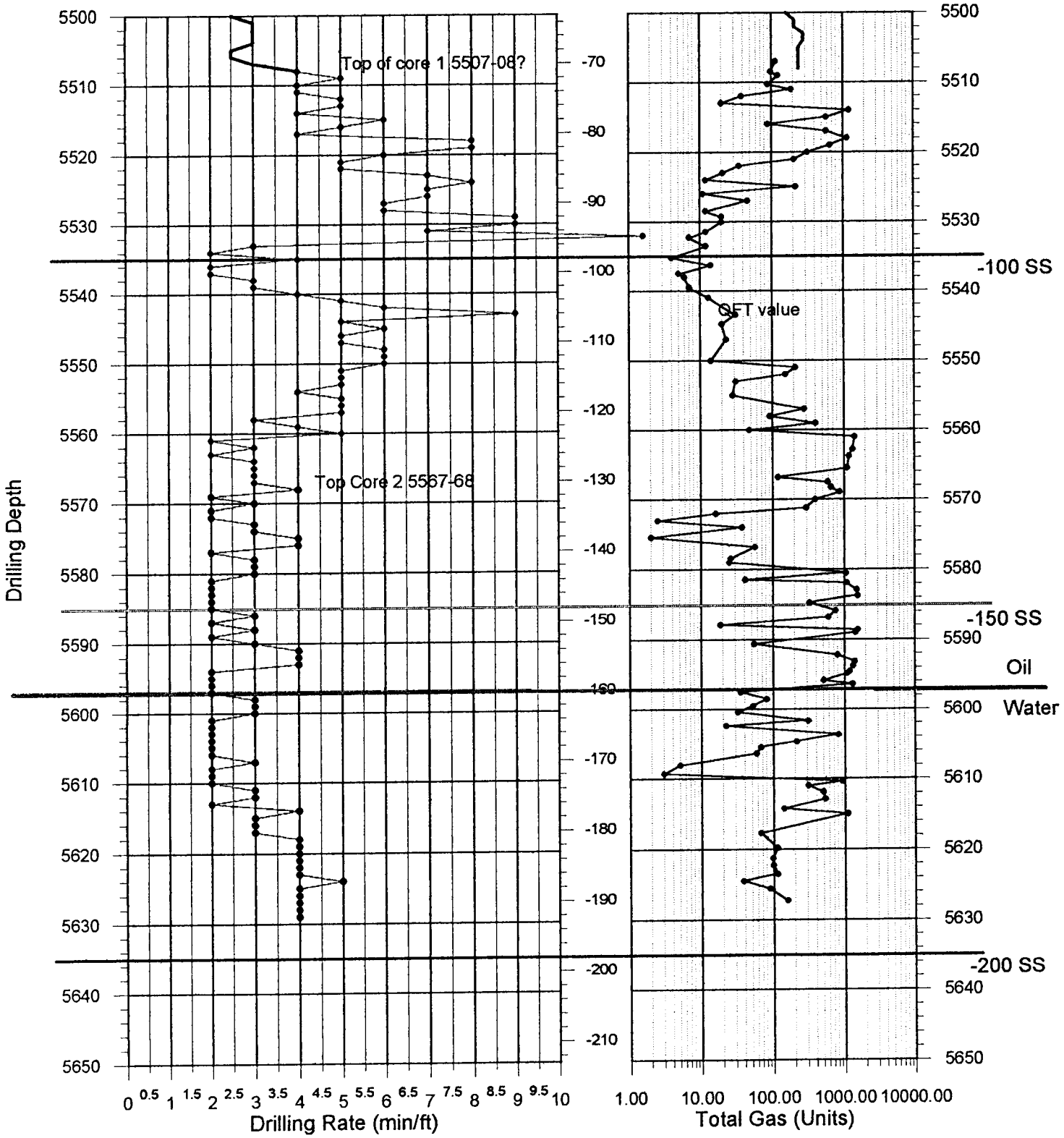
Time and Date Tool Opened: 6:42 A.M. 9-16-96

	Time (min)	Pressure (psi)
I.H.		2914
PREFLOW	30	101-157
I.S.I.	60	1512
F.F.	120	113-263
F.S.I.	120	1725
F.H.		2905

Bottom Hole Temperature (degrees F): 127

Recovery and Description

Preflow Description:	Open tool: B.O.B. @ 25 sec. 7# psi in 29 min increasing to 7.8# in 34 min. Tool shut in
Valve Open Description:	Open with 2" blow B.O.B. in less then 1 min. stayed until closing
Fluid Recovery:	468' gas cut mud- 90' mud
Sampler:	.65 c.f. gas, 200 c.c. oil, 850 c.c. water,100 c.c. mud
Salinity:	gas cut mud; 23000 ppm mud; 62000 ppm


Top of core 1 5507-08?
Top Core 2 5567-68
OFT value
-100 SS
-150 SS
Oil
Water
-200 SS
Drilling Depth
5500
5510
5520
5530
5540
5550
5560
5570
5580
5590
5600
5610
5620
5630
5640
5650
-70
-80
-90
-100
-110
-120
-130
-140
-150
-160
-170
-180
-190
-200
-210
0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6 6.5 7 7.5 8 8.5 9 9.5 10
Drilling Rate (min/ft)
1.00 10.00 100.00 1000.00 10000.00
Total Gas (Units)

DAILY DRILLING SUMMARY

Date	Depth	Progress	Hours Drlg.	Mud Mass	Visc.	W.L.	PH	Activity
9-1-96	surface	Nil						Drill rat and mouse hole
9-2-96	85'	85'	7.0	water				Drill and set conductor
9-3-96	1068'	983'	14 3/	water				Drilling
9-4-96	1678'	610'	15 1/	water				Drill, trip for bit,Drill
9-5-96	1678'	Nil	Ni					Cement surface,pressure test
9-6-96	2610'	932'	21 1/	water				Drilling
9-7-96	3461'	851'	19 1/	water				Drillimg, trip for bit,Drilling
9-8-96	4322'	861'	22 3/	water				Drilling
9-9-96	4923'	601'	22 1/	water				Drilling
9-10-96	5230'	307'	16 1/	water				Drill ,Trip for bit, Drill
9-11-96	5507'	277'	13 1/	9.4	50	10.0	12.0	Drilling, P.O.H, Circulate
9-12-96	5567'	60'	5 1/	9.5	45	10.0	10.0	Cir., T.O.H, Cutting core #1
9-13-96	5567'	Nil	Ni	9.5	45	10.0	10.0	Testing: DST #1
9-14-96	5567'	Nil	Ni	9.7	43	9.6	10.0	Testing, T.O.H.
9-15-96	5629'	62'	2 3/	9.6	45	9.0	9.0	Cutting core #2
9-16-96	5644'	115'	3 1/	9.7	45	9.0	10.0	Testing: DST #2, Drilling
9-17-96	5871'	127'	23 1/	10.9	56	13.0	10.5	Drilling
9-18-96	5871'	Nil	Ni	10.9	60	9.0	11.5	Logging with Schlumberger
9-19-96	5871'	Nil	Ni	10.9	60	9.0	11.5	W.O.O,T.I.H.,Cir.

LOGGING REPORT

Depth (Driller's):	5871'	Date:	9-18-96
Depth (Strap)	5871'	Logging Company	Schlumberger
Depth (Logger's):	5866'	Logging Engineer:	Tanya Prezkop
Surface Casing (Driller's)	1678' of 8 5/8"	Truck No:	3017
		Hole Size:	7 7/8"

Mud Details

Mud Type:	LSND	Weight:	10.9
pH:	11.0	Viscosity:	60
Water loss:	8.0	Salinity:	16,000 ppm

Operations Summary

Hole conditions prior to logging:	Excellent
Circulation time after T.D.	1 1/2 hrs.
Number of Wiper Trips:	Nil
Description of Wiper Trips:	Nil
Hours Logging:	9 1/2

Logging Sequence

Logs	Time Spent (hours)	Remarks
GR-SP-Induc.-LDT-CN	4	Stacked Set
GR-BHCS	4	Stacked Set-Platform Express
GR - FMI	1 1/2	

Number of Runs in Hole:	3	Succeeded: 3	Failed: Nil

Further Remarks

QFT
DATA

DEPTH	QFT	DEPTH	QFT	DEPTH	QFT
5080	40	5508.5	97	5536	14
5110	43	5509	123	5537	5
5140	31	5510.3	89	5538	6
5170	28	5511	188	5539	7
5200	33	5512	38	5541	13
5230	27	5513	20	5543	31
5260	25	5514	1200	5544	20
5290	55	5515	574	5547	23
5320	19	5516	89	5550	14
5350	9	5517	577	5551	208
5370	20	5518	1132	5552	151
5380	7	5519	647	5553	31
5390	2	5520	317	5555	28
5400	30	5521	207	5557	277
5410	16	5522	35	5558	91
5420	12	5523	21	5559	401
5430	105	5524	12	5560	47
5440	39	5525	214	5561	1411
5450	39	5526	11	5562	1324
5460	18	5527	46	5563	1172
5465	22	5528.5	12	5565	1098
5470	68	5529.3	20	5566	118
5475	62	5530	20	5567	585
5480	51	5531.5	12	5568	652
5485	91	5532.3	7	5569	860
5490	79	5533.5	12	5570	395
5507	114	5535.2	12	5571	292

QFT
DATA

DEPTH	QFT	DEPTH	QFT	DEPTH	QFT
5571.2	292	5597.5	35	5650	152
5572	16	5598.5	81	5660	521
5573	8	5599.5	52	5670	828
5574	37	5600.4	32	5680	234
5575.4	12	5601.7	308	5690	335
5576.8	56	5602.4	22	5700	350
5578.4	26	5603.7	804	5710	345
5579	25	5604.7	213	5720	368
5580.5	1053	5605.5	67	5730	542
5581.4	41	5606.4	58	5740	395
5581.9	1075	5608	5	5745	533
5582.7	1497	5609.3	3	5750	607
5583.7	1540	5610.4	931	5755	343
5584.7	329	5611	307	5760	619
5585.9	745	5611.9	493	5765	635
5586.9	591	5612.9	529	5770	362
5587.9	18.6	5614.3	140	5775	221
5588.6	1540	5615	1096	5780	344
5589	1437	5617.7	66	5785	173
5590.6	54	5619.8	114	5790	224
5592.2	797	5621.3	97	5795	353
5593.1	1382	5622.3	99	5800	205
5593.7	1327	5623.5	114	5805	356
5594.5	1175	5624.5	38	5820	597
5594.9	1074	5625.6	88	5825	468
5595.9	512	5627.3	157	5830	400
5596.4	1292	5640	138	5835	428

QFT
DATA

DEPTH	QFT	DEPTH	QFT	DEPTH	QFT
5845	410				
5850	390				
5855	280				
5860	275				
5865	325				
5870	290				

PETRAL EXPLORATION

 # 2 Knockdhu Unit
NE/NW/SE Section 33, T37S, R25E
San Juan County, Utah
API 43-037-31779 KB 5436'

Core # 1, 5507-5567, Upper Ismay Formation, Cut 60.5 Recovered 60.5

5507.0-5513.0 (6')	**SHALE** medium to dark gray, limy, massive, grading to argillaceous limestone, micromicaceous, small brachs, scattered shell debris, rubbilized at basal contact, with horizontal burrow traces throughout.
5513.0-5516.8 (3.8')	**ANHYDRITE** white, crystalline, translucent, mottle and mixed with light to medium anhydritic shale, light to medium gray brown, limy, massive, chicken wirw fabric, abundant medium to to dark gray churning at base.
5516.8-5520.8 (4')	**LIMESTONE** light to medium gray, very fine to microcrystalline, dense, hard, **tight, massive, occasional milky cut fluorescence,** scattered dark gray shale laminations, mottled with white anhydrite, carbonaceous partings, micaceous, scattered shell debris, brachiopods, fossil fragments, burrowed, dolomitic,trace pyrobitumen.
5520.8-5522.6 (1.8')	**ANHYDRITE** white, crystalline, hard, dense, mottled with gray anhydritic mudstone, massive, compaction deformation.
5522.6-5536.8 (14.2')	**LIMESTONE** light to medium gray brown, very fine to microcrystalline, hard, **tight, no show,** massive, dark gray shale laminations, micromicaceous, scattered shell debris, fossil fragments, burrowed, poker chiped in part, pyrite nodules, horizontal depositional laminations.
5536.8-5540.0 (3.2')	**ANHYDRITE** white, mottled gray, large chicken wire fabric.

5540.0-5555.2 (15.2')	**LIMESTONE** light to medium gray brown,very fine to micromicaceous, very fine to microcrystalline, banding, dense, **hard, tight, yellow fluorescence, no show,** massive, fossil fragments and shell debris, burrowed.
5555.2-5561.0 (5.8')	**LIMESTONE** light to medium gray brown, microcrystalline, occasional dark gray, carbonaceous partings, abundant anhydrite mottling and blebs, stylolitic (amplitude ½"), massive, dolomite banding, occasional pin point porosity, **yellow to white cut, light yellow residual ring cut.**
5561.0-5567.5 (6.5')	**LIMESTONE** light to medium gray brown, earthy, chalky, lithographic, massive, algal fabric, **trace pin point and fracture porosity (6-8%), strong hydrocarbon odor, yellow to white cut fluorescence, brown oil ring cut fluorescence, weak show in 5566 and 5567 chips.**

PETRAL EXPLORATION

 # 2 Knockdhu Unit
NE/NW/SE Section 33, T37S, R25E
San Juan Co., Utah
43-037-31779-0000 KB 5436'

CORE # 2, 5567-5628, Upper Ismay Formation, Cut 62 ft. Recovered 61 ft.

5567.0-5574.5 (7.5') **LIMESTONE** light gray brown with light blue gray mottling, very fine to microcrystalline, sucrosic texture, scattered anhydrite blebs, calcite replacement along pore throats & fractures, white fluorescence from calcite, **occasional surface voids, pinpoint & pore throat porosity, 10-14% fracture & intercrystalline porosity, brown oil stain, strong hydrocarbon odor, yellow white milky cut fluorescence, gold yellow residual ring cut, scattered tight streaks with weak shows,** algal fabric, burrowed.

5574.5-5577.7 (3.2') **DOLOMITE** light to dark gray brown, microcrystalline, lithographic, massive, dense, **hard, tight, no show,** anhydrite blebs, styolitic (amplitude ¼" to ½"), massive.

5577.7-5580.0 (3.2') **DOLOMITE** light gray brown, microcrystalline, lithographic, earthy, hard, **tight, occasional fracture porosity, no show,** anhydrite blebs, argillaceous.

5580.0-5589.5 (9.5') **DOLOMITE** light to medium gray brown, light gray, very fine to microcrystalline, sucrosic & granular texture inpart, **intercrystalline fracture & pin point porosity (6-12%), light brown oil stain, light yellow oil fluorescence, yellow white milky cut fluorescence, yellow gold residual ring cut,** mottled with calcite, color banded, anhydrite blebs, burrowed, common depositional laminations.

5589.5-5592.5 (3.0') **LIMESTONE** light gray brown, microcrystalline, minor anhydrite blebs, stylolites with calcite infill, pyrobitumen, dark gray argillaceous laminations, **surface voids and pin points, dull brown fluorescence, weak show,** mottled with freckled appearance.

5592.5-5598.3 (5.8')	**DOLOMITE** medium to dark gray brown, very fine to fine crystalline, sucrosic texture, argillaceous & earthy laminations, calcite blebs, lithographic, **10-12% intercrystalline & pin point porosity, strong hydrocarbon odor, mottled oil fluorescence, yellow gold milky cut fluorescence, yellow gold residual ring cut**, massive, small anhydrite blebs, horizontal worm burrows.
5598.3-5606.3 (8.0')	**LIMESTONE** light gray brown, very fine to microcrystalline, scattered fossil fragments, massive, fine chicken wire depositional laminations, **occasional pin point and surface voids, show & porosity increasing with depth, show as above,** styolitic at basal contact.
5606.3-5610.0 (3.7')	**LIMESTONE** medium to dark gray, microcrystalline, argillaceous, **hard,** (3.7') **tight, no show,** mottled with ¼" freckles of algal debris.
5610.0-5611.3 (1.3')	**DOLOMITE** medium to dark gray brown, very fine to microcrystalline, **weak shows, as above,** anhydrite blebs, ¼" pyrobitumen filled styolite at basal contact.
5611.3-5618.2 (7.1')	**LIMESTONE** light to medium gray brown, microcrystalline, **hard, tight, no show,** massive, wavy depositional laminations, anhydrite blebs, fossil fragments, fusilinids, crinoids, small shell fragments, small amplitude stylolites, argillaceous banding.
5618.2-5628.0 (9.8')	**LIMESTONE** light gray brown, microcrystalline, **hard, dense, tight, no show, weak shows at base, as above,** massive, scattered ¼" stylolites, occasional white calcite blebs, wavy depositional laminations with associated argillaceous banding, abundant small shell fragments, grainstone appearance.

FORMATION EVALUATION

#2 Knockdhu Unit
NE/NW/SE Sec. 33, T37S,R25E

Decollement Consulting rigged up 04:30 p.m. September 7, 1996. The objective was the Upper Ismay Mound. Sample collection started at 4000' and continued to total depth. The wellsite coverage included complete two man mudlogging with Quantitative Gas Measurement (QGM) trap, Mole Sample Dryer, and Quantitative Fluorescence Technique (QFT). The Lower Desert Creek Mound was a secondary zone of interest. There were two Cores and two DST's taken over the Upper Ismay Mound. The #2 Knockdhu offsets the #1 Knockdhu discovery well drilled in April of this year.

UPPER ISMAY MOUND 5535MD (-99SS)

The Upper Ismay mound was marked at the base of the massive anhydrite seen at a depth of 5540 in Core #1. The Limestone was light to medium gray brown, very fine to fine crystalline, interbedded with thin beds of argillaceous Dolomite. The mound facies had agal fabric, scattered shell debris and zones with mottling of calcite and anhydrite. The rock was generally tight with streaks and patches of 6-14% optical porosity. The porosity types were intercrystalline, pin point, pore throat and fracture. The sample shows were very well developed (see core descriptions) and correlated well with the QFT readings. The QFT and sample shows indicate a zone that is in the oil wet hydrocarbon window. The DST also recovered very little water. E-logs showed good porosities but low flow pressure from the DST's indicate low permeability or formation damage. Core analysis was not available at this writing and would shed light on reservoir quality. The

well is temporarily abandoned to study the possibility for stimulation or the cutting of a lateral leg from this bore hole.

CONCLUSION: The #2 Knockdhu needs further information before it is clear what its economic future holds.

LOWER DESERT CREEK MOUND 5599MD (-363SS)

The Lower Desert Creek Mound was marked by a light brown, light gray brown Dolomite. The zone had minor sample and mud gas shows. The E-logs showed the interval to be regional and of little interest.

CONCLUSION: The Lower Desert Creek Mound is of no economic at #2 Knockdhu.

LITHOGRAPHIC DESCRIPTIONS

PETRAL EXPLORATION, LLC
#2 KNOCKDHU UNIT
NE/NW/SE SEC.33,T37S,R25E

4000 - 4025 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4025 - 4050 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4050 - 4075 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4075 - 4100 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4100 - 4150 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4150 - 4175 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4175 - 4200 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4200 - 4225 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4225 - 4250 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4250 - 4275 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4275 - 4300 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4300 - 4325 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4325 - 4350 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4350 - 4375 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4375 - 4400 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4400 - 4414 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, mottled, scattered quartz grains, trace gypsum & anhydrite.

4414 - 4420 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, limestone lamination, scattered quartz grains, trace gypsum & anhydrite.

4420 - 4434 ft **LIMESTONE** white, soft, chalky, light gray to brown, microcrystalline, translucent, hard, **tight,** gray, lithographic, earthy, shale laminations.

HONAKER TRAIL 4434

4434 - 4444 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, limestone laminations, scattered quartz grains, trace gypsum & anhydrite.

4444 - 4464 ft **LIMESTONE** white, lithographic, chalky, firm to hard, very fine to microcrystalline, calcite crystals.

4464 - 4500 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4500 - 4540 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4540 - 4560 ft **LIMESTONE** white, lithographic, chalky, firm to hard, very fine to microcrystalline, calcite crystalline.

4560 - 4590 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4590 - 4610 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4610 - 4626 ft **SILT STONE** red brown, red, arenaceous, argillaceous, blocky, shale laminations, argillaceous matrix & cement.

4626 - 4640 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4640 - 4660 ft **LIMESTONE** white, lithographic, chalky, firm to hard, very fine to microcrystalline, calcite crystalline.

4660 - 4700 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4700 - 4750 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4750 - 4800 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4800 - 4822 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4822 - 4832 ft **SANDSTONE** white, clear, quartzose, fine grained, sub angular, poor sorted, calcareous cement, clay matrix, unconsolidated, **no show.**

4832 - 4880 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

4880 - 4910 ft **SANDSTONE** white, clear, quartzose, fine grained, sub angular, poor sorted, calcareous cement, clay matrix, unconsolidated, **no show.**

4910 - 5000 ft **SHALE** red brown, light gray, gray green, silty, sandy, waxy, limy, dolomitic, mottled, scattered quartz grains, trace gypsum & anhydrite.

5000 - 5020 ft **SHALE** red, red brown, arenaceous, silty, gray green, waxy, blocky, limy, dolomitic.

5020 - 5048 ft **SILTSTONE** red, red brown, arenaceous, argillaceous matrix & cement, blocky, limy, dolomitic.

5048 - 5070 ft **SANDSTONE** white, clear, quartzose, fine grained, sub angular, poor sorted, calcareous cement, clay matrix, unconsolidated, **no show.**

5070 - 5098 ft **SHALE** red, red brown, arenaceous, silty, gray green, waxy, blocky, limy, dolomitic.

5098 - 5148 ft **SHALE** red, red brown, arenaceous, silty, gray green, waxy, blocky, limy, dolomitic.

5148 - 5156 ft **SILTSTONE** red, red orange, arenaceous, calcareous, dolomitic, friable, clay matrix, calcareous cement.

5156 - 5202 ft **SHALE** red, red brown, arenaceous, silty, gray green, waxy, blocky, limy, dolomitic, medium to dark gray, carbonaceous, limy, greasy texture, petroliferous.

LA SAL 5202

5202 - 5222 ft **LIMESTONE** light gray, densely, very fine to microcrystalline, dolomitic, argillaceous, hard, translucent.

5222 - 5262 ft **LIMESTONE** medium to dark brown, dense, very fine to microcrystalline, dolomitic, argillaceous, hard, translucent, white chalky.

5262 - 5284 ft **LIMESTONE** light gray, light gray brown, dense, very fine to microcrystalline, dolomitic, argillaceous, hard, translucent, white chalky, fossil fragments.

5284 - 5310 ft **SHALE** light gray, waxy, smooth texture, arenaceous, silty, gray green, waxy, blocky, limy, dolomitic, medium to dark gray, carbonaceous, limy, greasy texture, petroliferous.

5310 - 5332 ft **LIMESTONE** white, tan, chalky, dense, very fine to microcrystalline, dolomitic, dense , sucrosic texture inpart, argillaceous, hard, translucent, white chalky.

5332 - 5350 ft **SHALE** light gray, dolomite, waxy, smooth texture, arenaceous, silty, gray green, waxy, blocky, limy, dolomitic, medium to dark gray, carbonaceous, limy, greasy texture, petroliferous.

5350 - 5400 ft **LIMESTONE** white, tan, chalky, densely, very fine to microcrystalline, dolomitic, dense, sucrosic texture inpart, argillaceous, hard, translucent, white chalky.

5400 - 5450 ft **LIMESTONE** white, tan, chalky, dense, very fine to microcrystalline, dolomitic, dense, sucrosic texture inpart, argillaceous, hard, translucent, white chalky.

5450 - 5474 ft **LIMESTONE** white, tan, chalky, dense, very fine to microcrystalline, dolomitic, dense, sucrosic texture inpart, argillaceous, hard, translucent, white chalky.

5474 - 5513 ft **SHALE** light gray, dolomitic, waxy, smooth texture, arenaceous, silty, gray green, waxy, blocky, limy, dolomitic, medium to dark gray, carbonaceous, limy, greasy texture, petroliferous.

UPPER ISMAY 5513

5513 - 5517 ft **ANHYDRITE** white, crystalline, translucent, mottled, limestone laminations, massive.

5517 - 5521 ft **LIMESTONE** light to medium gray, very fine to microcrystalline, dense, hard, tight, massive, **trace yellow to gold cut fluorescence,** shale laminations, dolomitic, anhydrite laminations, carbonaceous, micaceous, shell debris, brachiopods, burrowed.

5521 - 5523 ft **ANHYDRITE** white, crystalline, translucent, mottled, limestone laminations, massive.

5523 - 5537 ft **LIMESTONE** light to medium gray brown, very fine to microcrystalline, dense, hard, tight, massive, **no show,** shale laminations, dolomitic, anhydrite laminations, carbonaceous, micaceous, shell debris, brachiopods, pyritic, burrowed.

5537 - 5540 ft **ANHYDRITE** white, crystalline, translucent, mottled, limestone laminations, mixed.

5540 - 5555 ft **LIMESTONE** light to medium gray brown, very fine to microcrystalline, dense, hard, tight, massive, light gold to yellow fluorescence, **no show,** shale laminations, dolomitic, micaceous, shell debris, burrowed.

5555 - 5561 ft **LIMESTONE** light to medium gray brown, microcrystalline, occasionally dark gray, carbonaceous, anhydrite laminations, styolitic, dense, hard, tight, massive, **occasional pin point & fracture porosity, light gold to yellow cut fluorescence, light yellow residual ring cut,** shale laminations, dolomitic, micaceous, shell debris, burrowed.

5561 - 5567 ft **LIMESTONE** light to medium gray brown, earthy, chalky, lithographic, agal fabric, massive, **occasionally pin point & fracture porosity (6 to 8%), strong hydrocarbon odor, light gold to yellow cut fluorescence, light yellow residual ring cut,** dolomite laminations, micaceous, shell debris, burrowed.

5567 - 5574.5 **LIMESTONE** light to medium gray brown with light blue mottling, very fine to microcrystalline, sucrosic texture, scattered anhydrite blebs, calcite infill, agal fabric, burrowed, massive, surface voids, **occasional pin point & fractured porosity (10 to 14%), strong hydrocarbon odor, light gold to yellow cut fluorescence, light yellow residual ring cut,** dolomite lamination, micaceous, shell to debris, burrowed.

5574.5 - 5580 **DOLOMITE** light to dark gray brown, microcrystalline, lithographic, massive, dense, hard, tight, **no show,** anhydrite blebs, styolitic.

5580- 5589.5 ft **DOLOMITE** light to medium gray brown, light gray, very fine to microcrystalline, sucrosic & granular texture, **intercrystalline fracture & pin point porosity (6 to 12%), light brown oil staining, light yellow oil fluorescence, yellow white milky cut fluorescence, yellow gold residual ring cut,** mottled, color banded, anhydrite blebs, burrowed.

5589.5-5592.5 **LIMESTONE** light gray brown, microcrystalline, anhydrite blebs, stylolitic, pyrobitumen, shale laminations, **small vugs & pin point, dull brown fluorescence, weak show,** mottled freckled appearance.

5592.5-5598.3 **DOLOMITE** medium to dark gray brown, light gray, very fine to fine crystalline, sucrosic & granular texture, argillaceous laminations, calcite blebs, lithographic, **intercrystalline fracture and pin point porosity (10 to 12%), light brown oil staining, yellow oil fluorescence, yellow white milky cut fluorescence, yellow gold residual ring cut**, mottled, color banded, anhydrite blebs, burrowed.

5598.3-5606.3 **LIMESTONE** light gray brown, very fine to microcrystalline, scattered fossile fragments, massive, fine chicken wire deposional laminations, **pin point & vuggy porosity, fair show increasing with depth, show a /a,** styolitic at base.

5606.3-5612 **LIMESTONE** medium to dark gray, microcrystalline, hard, **tight, no show,** mottled with 1/ 4" freckles of agal debris.

5612-5618.5 **LIMESTONE** light to medium gray brown, microcrystalline, **tight, no show,** massive, wavy deposional laminations, anhydrite blebs, fossil fragments, crinoidal, shell debris, styolitic, argillaceous laminations.

5618.5-5629 **LIMESTONE** light gray brown, microcrystalline, hard, **tight, no show, weak show at base, as above,** styolitic, calcite blebs, massive, wavy deposional laminations, anhydrite blebs, fossil fragments, crinoidal, shell debris, styolitic, argillaceous laminations.

5629 - 5672 ft **SHALE** medium to dark gray, black, sooty, greasy, petroliferous, blocky, fissile, slightly calcareous, dolomitic, earthy, **milky cut fluorescence.**

LOWER ISMAY 5672

5672 - 5690 ft **LIMESTONE** light to medium gray brown, very fine to microcrystalline, argillaceous, lithographic, earthy, chalky, occasional fossil fragments, **tight, no show.**

LOWER ISMAY ANHYDRITE 5690

5690 - 5716 ft **ANHYDRITE** white, soft, chalky, crystalline, sucrosic texture.

LOWER ISMAY CARBONATE 5716

5716 - 5724 ft **LIMESTONE** light to medium gray brown, very fine to microcrystalline, argillaceous, lithographic, earthy, chalky, occasional fossil fragments, **tight, no show.**

GOTHIC 5724

5724 - 5744 ft **SHALE** medium to dark gray, black, sooty, greasy, petroliferous, blocky, fissile, slightly calcareous, dolomitic, earthy, **milky cut fluorescence.**

UPPER DESERT CREEK 5744

5744 - 5754 ft **DOLOMITE** light to medium gray brown, very fine to microcrystalline, argillaceous, lithographic, earthy, chalky, limy, occasional fossil fragments, **tight, no show.**

5754 - 5770 ft **ANHYDRITE** white, soft, chalky, crystalline, sucrosic texture.

LOWER DESERT CREEK 5770

5770 - 5796 ft **DOLOMITE** light to medium gray brown, very fine to microcrystalline, argillaceous, lithographic, earthy, chalky, limy, grades to dolomitic shale, occasional fossil fragments, **tight, no show.**

LOWER DESERT CREEK ANHYDRITE 5796

5796 - 5802 ft **ANHYDRITE** white, soft, chalky, crystalline, sucrosic texture.

LOWER DESERT CREEK MOUND 5802

5802 - 5820 ft **DOLOMITE** light to medium gray brown, brown, tan, very fine to microcrystalline, occasionally fossil fragments, **light brown staining, faint milky cut, 6 to 8% intercrystalline porosity.**

CHIMNEY ROCK 5820

5820 - 5846 ft **SHALE** medium to dark gray, black, sooty, greasy, petroliferous, blocky, fissile, slightly calcareous, dolomitic, earthy, **milky cut fluorescence.**

AKAH 5846

5846 - 5871 ft **DOLOMITE** light to medium gray brown, very fine to microcrystalline, limy, argillaceous, fossil fragments, **tight, no show.**

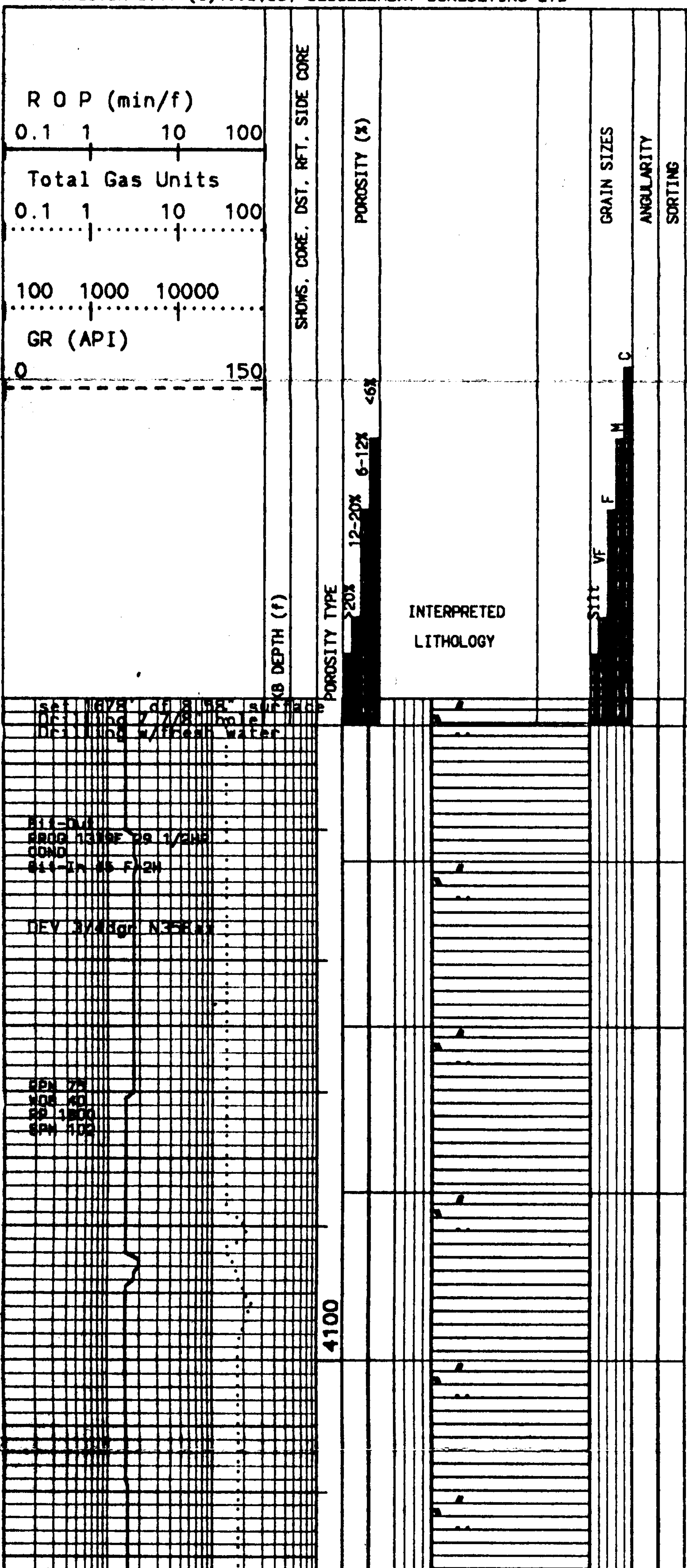
#2 Knockdhu Unit

WELLSITE CONTRACTOR: Decollement Consulting, Inc.
OPERATOR: Petral Exploration, LLC
GEOGRAPHIC LOCATION: 24 Miles SE of Blanding Utah
SURFACE LOCATION: NE/NW/SE Sec. 33,T37S,R25E
CO-ORDINATES: 1950' FSL, 1573' FEL
A.F.E. NUMBER : Knockdhu Unit 75040X
KB ELEVATION: 5436
GRD ELEVATION: 5424
GEOLOGIST: Roger D. Charbonneau/Paul B. McKay
SPUD DATE: 9-1-96
RIG RELEASE DATE: 9-21-96
TOTAL DEPTH: 5871/9-18-96
SURFACE CASING: 1678' of 8 5/8"
DRILLING FLUID: LSND

CORE#: 1 Upper Ismay FM 5507-5567 DST#: 1 Upper Ismay FM 5525-5567
CORE#: 2 Upper Ismay FM 5567-5629 DST#: 2 Upper Ismay FM 5564-5629

RECEIVED
SEP 17 1997
DIV. OF OIL, GAS & MINING

SCALE 1:48
PROSPECTOR 6.1v (c)1993,06, DECOLLEMENT CONSULTING LTD



LITHOLOGICAL DESCRIPTION

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4200

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

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SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4300

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

DATE 9-9-96
Dri[illegible]

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4400

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, LS LAM, SCATTERED QTZ GRNS, TR GYP & ANHY.

C

F

LS WH, SFT, CHKY, LT GY-BRN, MICROXL, TRAN, HD, TT, GY, LITH, RTHY, SH LAM.

FM Kaniket Trail

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, LS LAM, SCATTERED QTZ GRNS, TR GYP & ANHY.

F

LS WH, LITH, CHKY, FRM-HD, VF-MICXL, CALCITE XL,

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4300

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

DATE 9-9-96
Drilling

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4400

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

#2 Kr[illegible] Unit

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, LS LAM, SCATTERED QTZ GRNS, TR GYP & ANHY.

F

LS WH, SFT, CHKY, LT GY-BRN, MICROXL, TRAN, HD, TT, GY, LITH, RTHY, SH LAM.

C

FM Meniker Trail

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, LS LAM, SCATTERED QTZ GRNS, TR GYP & ANHY.

F

LS WH, LITH, CHKY, FRM-HD, VF-MICXL, CALCITE XL.

C

RPM 75
WOB 40
PP 1800
SPM 102

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4500

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

F

LS WH, LITH, CHKY, FRM-HD, VF-MICXL, CALCITE XL.

C

DEV 3/4[illegible] N2E[illegible]

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4600

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

#2 Kr[illegible] U[illegible]

MW 8.7
VV 37

MW 8.7
MV 37
MF
pH

WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SLTST RED BRN, RED, AREN, ARG, BLKY, SH LAM, ARG MTX & CMT.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

C

F

LS WH, LITH, CHKY, FRM-HD, VF-MICXL, CALCITE XL.

4700

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

P

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

4800

MW 8.7
MV 28
MF
pH

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

X

a

P

SS WH, CLR, QTZS, F GR, SB ANG, P SRT, CALC CMT, CLY MTX, UNCONSOLIDATED, NO SHOW.

SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SPM 75
VOL 40
RP 1800
SPM 102

4900

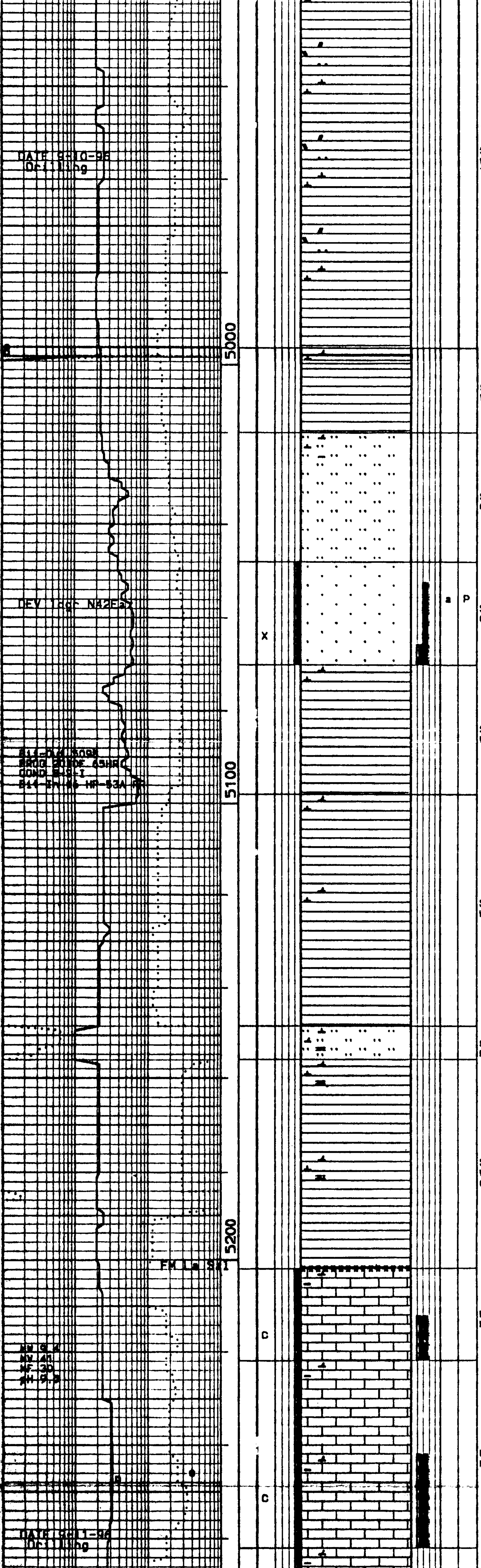
X

a

P

SS WH, CLR, QTZS, F GR, SB ANG, P SRT, CALC CMT, CLY MTX, UNCONSOLIDATED, NO SHOW.

#2 Knackstedt Unit



SH RED BRN, LT GY, GY GREEN, SLTY, SDY, WXY, LMY, DOL, MOT, SCATTERED QTZ GRNS, TR GYP & ANHY.

SH RED, RED BRN, AREN, SLTY, GY GREEN, WXY, BLKY, LMY, DOL.

SLTST RED, RED BRN, AREN, ARG MTX & CMT, BLKY, LMY, DOL.

SS WH, CLR, QTZS, F GR, SB ANG, P SRT, CALC CMT, CLY MTX, UNCON, NO SHOW.

SH RED, RED BRN, AREN, SLTY, GY GREEN, WXY, BLKY, LMY, DOL.

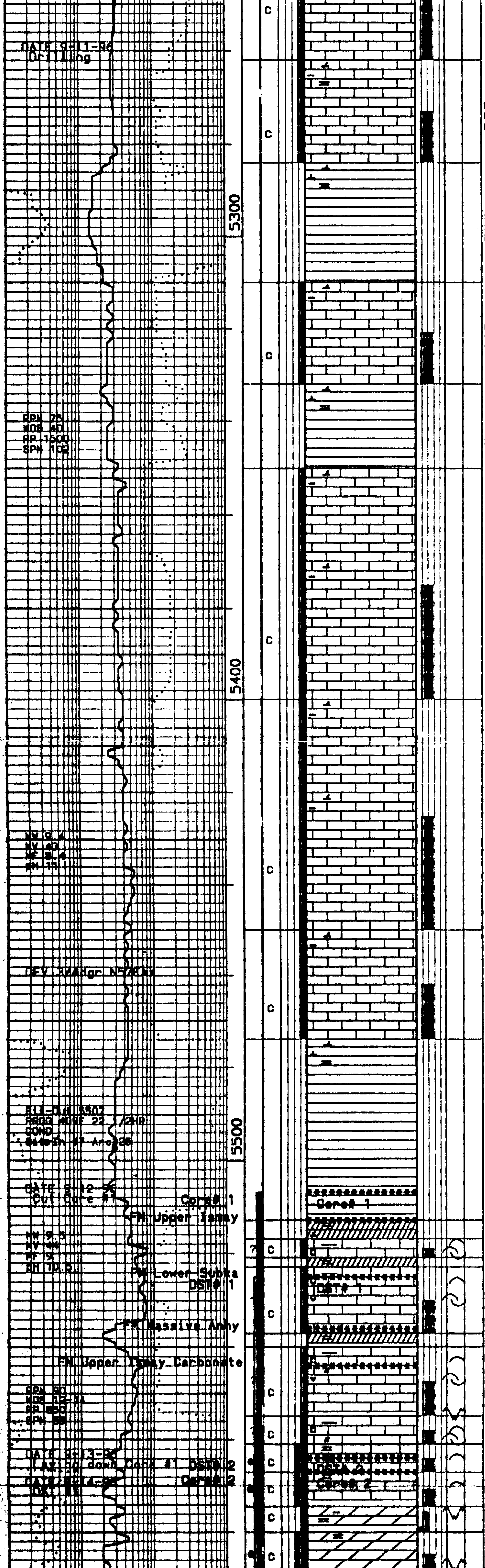
SH RED, RED BRN, AREN, SLTY, GY GREEN, WXY, BLKY, LMY, DOL.

SLTST RED, RED ORANGE, AREN, CALC, DOL, FRI: CLY MTX: CALC CMT

SH RED, RED BRN, AREN, SLTY, GY GREEN, WXY, BLKY, LMY, DOL, M-DK GY, CARB, LMY, GREASY TEX, PET.

LS LT GY, DNS, VF-MICROXL, DOL, ARG, HD, TRAN.

LS M-DK BRN, DNS, VF-MICROXL, DOL, ARG, HD, TRAN, WH CHKY.



LS LT GY, LT GY BRN,, DNS, VF-MICROXL, DOL, ARG, HD, TRAN, WH CHKY, FOS FRAGMENTS.

SH LT GY, DOL, WXY, SMOOTH TEX, AREN, SLTY, GY GREEN, WXY, BLKY, LMY, DOL, M-DK GY, CARB,LMY, GREASY TEX, PET.

LS WH, TAN, CHKY, DNS, VF-MICROXL, DOL, DENSE ,SUC TEX INPART, ARG, HD, TRAN, WH CHKY.

SH LT GY, DOL, WXY, SMOOTH TEX, AREN, SLTY, GY GREEN, WXY, BLKY, LMY, DOL, M-DK GY, CARB,LMY, GREASY TEX, PET.

LS WH, TAN, CHKY, DNS, VF-MICROXL, DOL, DENSE ,SUC TEX INPART, ARG, HD, TRAN, WH CHKY.

LS WH, TAN, CHKY, DNS, VF-MICROXL, DOL, DENSE ,SUC TEX INPART, ARG, HD, TRAN, WH CHKY.

LS WH, TAN, CHKY, DNS, VF-MICROXL, DOL, DENSE ,SUC TEX INPART, ARG, HD, TRAN, WH CHKY.

SH LT GY, DOL, WXY, SMOOTH TEX, AREN, SLTY, GY GREEN, WXY, BLKY, LMY, DOL, M-DK GY, CARB,LMY, GREASY TEX, PET.

ANHY WH, XL, TRAN, MOT, LS LAM, MIXED.

LS LT-M GY, V F-MICROXL, DENSE, HD, TT, MAS, TR YEL-GOLD CUT FLOR, SH LAM, DOL,

ANHY WH, XL, TRAN, MOT, LS LAM, MIXED.

LS LT-M GY BRN, V F-MICROXL, DENSE, HD, TT, MAS, NO SHOW, SH LAM, DOL, ANHY LAM, CARB, MICA, SHL-DEB, BRACH, PYR, BUR.

ANHY WH, XL, TRAN, MOT, LS LAM, MIXED.

LS LT-M GY BRN, V F-MICROXL, DENSE, HD, TT, MAS, LT GOLD-YEL FLOR, NO SHOW, SH LAM, DOL, MICA, SHL-DEB, BUR.

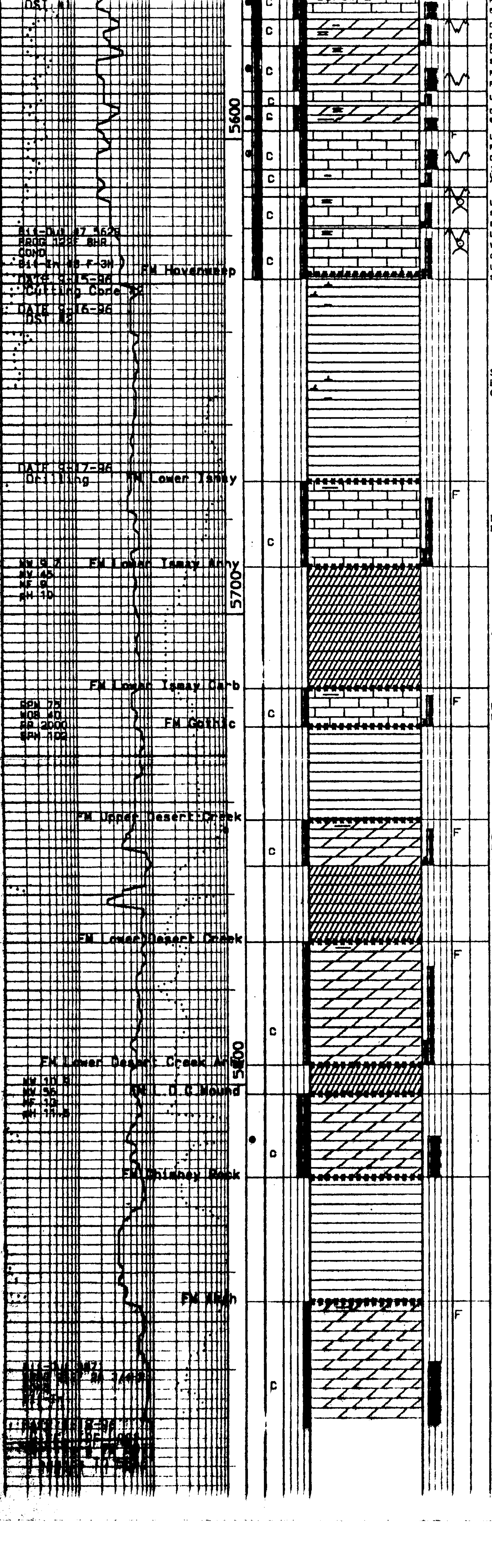
LS LT-M GY BRN, MICROXL, OCC DK GY, CARB, ANHY LAM, STYL, DENSE, HD, TT, MAS, OCC PP & FRAC POR, LT GOLD-YEL CUT

LS LT-M GY BRN, RTHY, CHKY, LITH, AGAL FABRIC, MAS, OCC PP & FRAC POR (6-8%), STRONG HYDROCARBON ODOR, LT GOLD-YEL

LS LT-M GY BRN WITH LT BLUE MOT,V F-MICROXL, SUC TEX, SCATTERED ANHY BLEBS, CALCITE INFILL, AGAL FABRIC.

DOL LT-DK GY BRN, MICROXL, LITH, MAS, DENSE, HD, TT, NO SHOW, ANHY BLEBS, STYL

DOL LT-M GY BRN, LT GY, V F-MICROXL, SUC & GRANULAR TEX, INTERXL FRACTURE & PP POR (6-12%), LT BRN O STN, LT YEL O



BLEBS, CALCITE INFILL, AGAL FABRIC.

DOL LT-DK GY BRN, MICROXL, LITH, MAS, DENSE, HD, TT, NO SHOW, ANHY BLEBS, STYL

DOL LT-M GY BRN, LT GY, V F-MICROXL, SUC & GRANULAR TEX, INTERXL FRACTURE & PP POR (6-12%), LT BRN O STN, LT YEL O FLOR, YEL WH MILKY CUT FLOR, YEL GOLD

LS LT GY BRN, MICROXL, ANHY BLEBS,

DOL M-DK GY BRN, LT GY, V F-F XL, SUC & GRANULAR TEX, ARG LAM, CALCITE BLEBS,

LS LT GY BRN, V F-MICROXL, SCATTERED FOS FRAG, MAS, F CHICKEN WIRE DEPOSIONAL LAM, PP & VUG POR, FAIR SHOW INCREASING WITH DEPTH, SHOW A/A, STYL AT BASE.

LS M-DK GY, MICROXL, ARG, HARD, TT, NO

LS LT-M GY BRN, MICROXL, HD, TT, NO SHOW, MAS, WAVY DEPOSIONAL LAM, ANHY BLEBS, FOS FRAG, CRIN, SHEL-DEB, STYL,

LS LT GY BRN, MICROXL, HD, TT, NO SHOW, WEAK SHOW AT BASE, AS ABOVE, STYL, CALCITE BLEBS, MAS, WAVY DEPOSIONAL LAM, ANHY BLEBS, FOS FRAG, CRIN, SHEL-DEB, STYL, ARG LAM.

SH M-DK GY, BLK, SOOTY, GREASY, PET, BLKY, FIS, SL CALC, DOL, RTHY, MILKY CUT FLOR.

LS LT-M GY BRN, VF-MICROXL, ARG, LITH, RTHY, CHKY, OCC FOS FRAG, TT, NO SHOW.

ANHY WH, SFT, CHKY, XL, SUC TEX.

LS LT-M GY BRN, VF-MICROXL, ARG, LITH, RTHY, CHKY, OCC FOS FRAG, TT, NO SHOW.

DOL LT-M GY BRN, VF-MICROXL, ARG, LITH, RTHY, CHKY, LMY, OCC FOS FRAG, TT, NO SHOW.

ANHY WH, SFT, CHKY, XL, SUC TEX.

DOL LT-M GY BRN, VF-MICROXL, ARG, LITH, RTHY, CHKY, LMY, GRADES TO DOL SH, OCC FOS FRAG, TT, NO SHOW.

ANHY WH, SFT, CHKY, XL, SUC TEX.

DOL LT-M GY BRN, BRN, TAN, VF-MICROXL, OCC FOS FRAG, LT BRN STN, FAINT MILKY CUT, 6-8% INTRXL POR.

DOL LT-M GY BRN, VF-MICROXL, LMY, ARG, FOS FRAG, TT, NO SHOW

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: UTU-065915

6. If Indian, Allottee or Tribe Name: NA

7. If Unit or CA, Agreement Designation: Knockdhu Unit 75040X

1. Type of Well: [XX] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.: 2

2. Name of Operator: Petral Exploration, LLC

9. API Well No.: 4303731779

3. Address and Telephone No.: c/o McIlnay & Associates, Inc. 2305 Oxford Lane, Casper, WY 82640 (307) 265-4351

10. Field and Pool, or Exploratory Area: Unnamed

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): (SE NW SE) 1950' FSL & 1573' FEL Sec. 33-T37S-R25E

11. County or Parish, State: San Juan Co., UT

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[XX] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[XX] Other Site Security	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Attached is the Site Security Diagram and Site Security Plan.

RECEIVED
OCT 20 1997
DIV. OF OIL, GAS & MINING

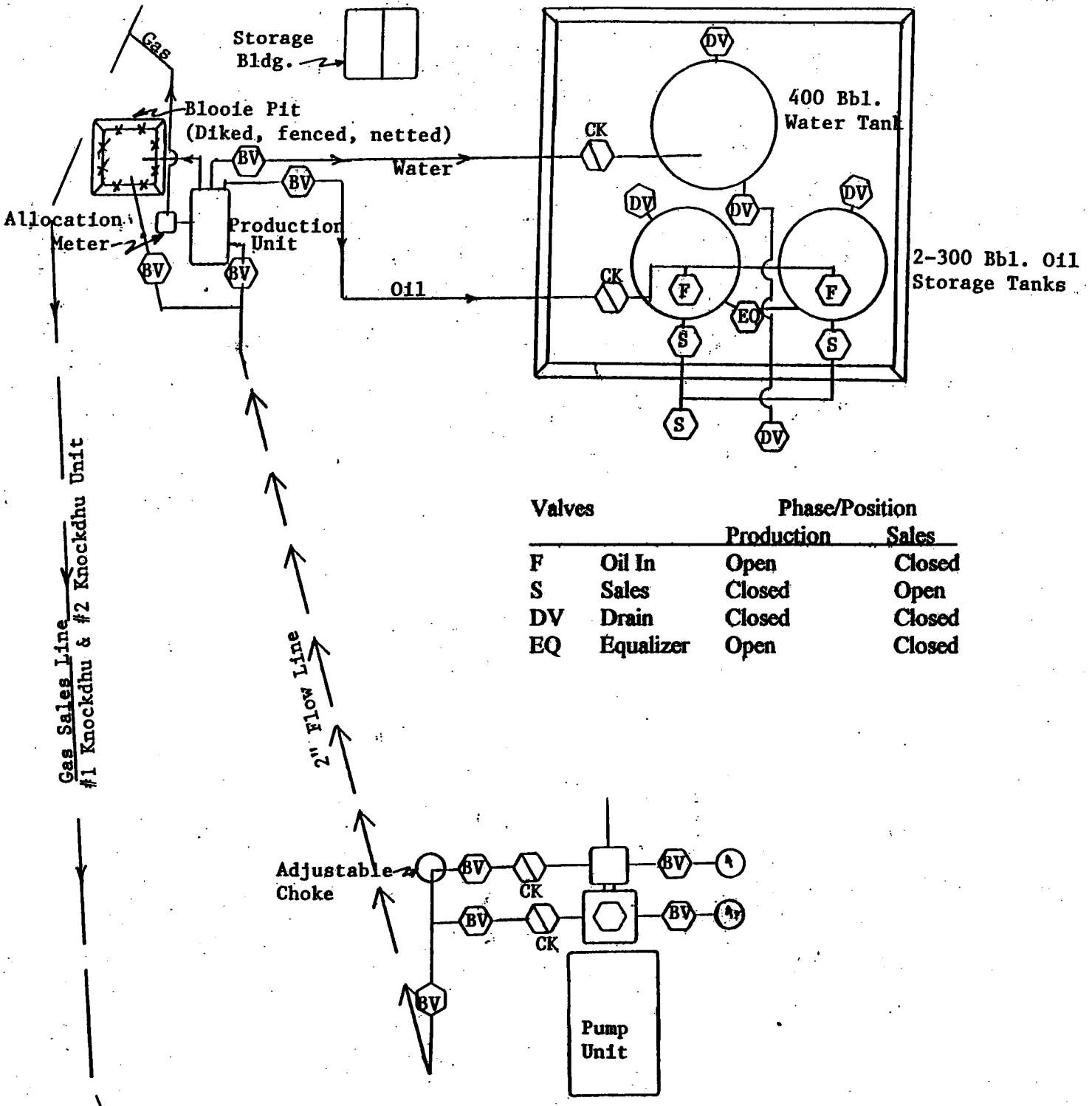
14. I hereby certify that the foregoing is true and correct
Signed [signature] Title McIlnay & Associates, Inc. Consulting Engineers Date 10-15-97

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side



Valves		Phase/Position	
		Production	Sales
F	Oil In	Open	Closed
S	Sales	Closed	Open
DV	Drain	Closed	Closed
EQ	Equalizer	Open	Closed

Located at Patterson "A" Battery
S/2 SW/4 Sec. 33-T37S-R25E
San Juan County, Utah

FACILITY DIAGRAM
Petral Exploration, LLC
#2 Knockdhu Unit
SE NW SE Sec. 33-T37S-R25E
San Juan County, Utah
Lease #UTU065915
Unit #UTU75040X

SITE SECURITY PLAN

Petral Exploration, LLC
Paradox Basin Project

1. Self Inspection Program: The lease will be inspected on a daily basis and production volumes recorded. All valves requiring seals will be sealed.

2. A record will be made of the seals used including the serial number, date on, date off, and description of use. All sales will be documented by complete and accurate run tickets.

3. Any incidents of theft or mishandling of oil will be reported no later than the next business day to the authorized officer. All oral reports shall be followed up with a written report within 10 business days. The incident report shall supply the following:

   a. Company Name and name of the individual reporting the incident.

   b. Lease number, communitization agreement number, or unit agreement name and number and participating area, as appropriate.

   c. Legal location of the facility where the incident occurred.

   d. The estimated volume of oil or condensate removed.

   e. The way access was obtained to the production or how the mishandling occurred.

   f. The individual who discovered the incident.

   g. Date and time of the discovery of the incident.

   h. Whether the incident was or was not reported to local law enforcement agencies and company security.

4. Lease inspection to ensure that there are no by-passes of meters.

5. Leases, communitization agreements, unit agreements, and specific facilities that are subject to this plan: Knockdhu Unit No. UTU - 75040X (Moab & Monticello Offices), Knockando Lease No. UTU - 065915, and all other Petral operated wells in the San Juan Resource Area.

6. Authorized Officers:

   Monticello BLM Office, San Juan Resource Area, 435 No. Main, Monticello, UT 84535, Phone (801)587-2141; Attn.: Gary Torres, Jeff Brown.

   Moab District Office, 82 Dogwood, Ste. M, Moab, UT 84532, Phone (801)259-6111; Attn: Eric Jones

STATE OF UTAH
DIVISION OF OIL, GAS AND MINING
1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801

11/18/1999

MONTHLY OIL AND GAS PRODUCTION REPORT

OPERATOR NAME AND ADDRESS

SIBYL SWOPE
PETRAL EXPLORATION LLC
P O BOX 5083
DENVER, CO 80217-5083

UTAH ACCOUNT NUMBER: N7700

REPORT PERIOD (MONTH/YEAR): 10 / 1999

AMENDED REPORT ☐ (Highlight Changes)

WELL NAME / API Number / Entity / Location	Producing Zone	Well Status	Well Type	Days Oper	Production Volumes OIL(BBL)	GAS(MCF)	WATER(BBL)
SHANE FEDERAL 1 4303731406 10999 37S 24E 07	ISMY		GW		UTU-39243	Apprv. 11.24.99	
BLACK BULL FEDERAL 31C 4303731663 11352 38S 25E 31	DSCR		GW				
KNOCKDHU #1 4303731773 11890 37S 25E 33	ISMY		GW		UTU-65915	Knockdhu Unit	Apprv 1.22.2000 (Changed)
KNOCKDHU UNIT 3 4303731785 11890 37S 25E 33	ISMY		GW		UTU-75521	Apprv. 11.24.99	" " (Unit)
DALMORE FEDERAL 1-A 4303731786 12098 37S 23E 25	ISMY		GW		UTU-41085	Apprv. 11.24.99	
OCKDHU UNIT 2 4303731779 12111 37S 25E 33	ISMY		GW		UTU-65915	Apprv 11.24.99	
TOTALS							

COMMENTS : _____

I hereby certify that this report is true and complete to the best of my knowledge. Date: _____

Name and Signature: _____ Telephone Number: _____

FORM 9

STATE OF UTAH

DIVISION OF OIL, GAS AND MINING

5. Lease Designation and Serial Number: UTU-65915

6. If Indian, Allottee or Tribe Name:

7. Unit Agreement Name:

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells. Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

8. Well Name and Number: KnockdhuUnit #2

1. Type of Well: OIL [X] GAS [ ] OTHER:

9. API Well Number: 43-037-31779

2. Name of Operator: ROBERT L. BAYLESS, PRODUCER LLC

10. Field and Pool, or Wildcat: Unnamed

3. Address and Telephone Number: PO BOX 168, FARMINGTON, NM 87499 (505) 326-2659

4. Location of Well

Footages: 1950'FSL & 1573'FEL

County: San Juan

QQ, Sec., T., R., M.: T37S-R25E Sec 33 SE/4NW/4SE/4

State: Utah

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
[ ] Abandon	[ ] New Construction	[ ] Abandon *	[ ] New Construction
[ ] Repair Casing	[ ] Pull or Alter Casing	[ ] Repair Casing	[ ] Pull or Alter Casing
[ ] Change of Plans	[ ] Recomplete	[ ] Change of Plans	[ ] Perforate
[ ] Convert to Injection	[ ] Perforate	[ ] Convert to Injection	[ ] Vent or Flare
[ ] Fracture Treat or Acidize	[ ] Vent or Flare	[ ] Fracture Treat or Acidize	[ ] Water Shut-Off
[ ] Multiple Completion	[ ] Water Shut-Off	[X] Other Change of Operator	
[ ] Other		Date of work completion	
Approximate date work will start			

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.

* Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Please be advised that Petral will transfer operations of this well effective November 1, 1999.

From: Dianne Snyder

Petral Exploration, LLC, Captiva Resources, Inc., Manager
P.O. Box 5093
Denver, CO 80217-5083

New Operator:

RECEIVED
DIV. OF OIL, GAS & MINING

13. Name & Signature: Tom McCarthy Tom McCarthy Title: Engineer Date: 11/3/99

(This space for State use only)

150/109

(See Instructions on Reverse Side)

(5/94)

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
MOAB FIELD OFFICE
1999 NOV 12 P 2:07
DEPT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.
UTU-65915

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

1. Type of Well
[X] Oil Well [ ] Gas Well [ ] Other

8. Well Name and No.
Knockdhu Unit #2

2. Name of Operator
ROBERT L. BAYLESS, PRODUCER LLC

9. API Well No.
43-037-31779

3. Address and Telephone No.
PO BOX 168, FARMINGTON, NM 87499 (505) 326-2659

10. Field and Pool, or Exploratory Area
Unnamed

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
(SE/4NW/4/SE/4) 1950' FSL & 1573' FEL Sec 33-T37S-R25E

11. County or Parish, State
San Juan Co., Utah

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[ ] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[X] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Change of Operator	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Please be advised that Petral Exploration, LLC. will transfer operations of this well effective November 1, 1999

From:
Petral Exploration, LLC., Captiva Resources, Inc., Manager
P.O. Box 5033
Denver, CO 80217-5083 Bond Info: WY-2883

New Operator:
Robert L. Bayless, Producer LLC
368 NM Hwy 170
PO Box 168
Farmington, NM 87499 (505) 326-2659
BLM Bond No. NM0883
Effective Date: October 1, 1975

NOV 18 1999
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct
Signed Tom McCarthy Title Engineer Date 11/3/99

(This space for Federal or State office use)
Approved by William Title Assistant Field Manager, Division of Resources Date 11/15/99
Conditions of approval, if any:
CONDITIONS OF APPROVAL ATTACHED

cc: DOGM 11/15/99

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

15 of 19

Robert L. Bayless, Producer LLC
Well No. 2
Sec. 33, T. 37 S., R. 25 E.
Lease UTU65915
San Juan County, Utah

CONDITIONS OF APPROVAL

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Be advised that Robert L. Bayless, Producer LLC is considered to be the operator of the above well and is responsible under the terms and conditions of the lease for the operations conducted on the leased lands.

Bond coverage for this well is provided by NM0883 (Principal - Robert L. Bayless, Producer LLC) via surety consent as provided for in 43 CFR 3104.2.

This office will hold the aforementioned operator and bond liable until the provisions of 43 CFR 3106.7-2 continuing responsibility are met.

Division of Oil, Gas and Mining

OPERATOR CHANGE WORKSHEET

Routing:

1-KDR	6-KAS
2-~~GLH~~	~~7-SJ~~
3-JRB	8-FILE
~~4-CDW~~	
5-KDR	

Attach all documentation received by the division regarding this change.
Initial each listed item when completed. Write N/A if item is not applicable.

☒ Change of Operator (well sold) ☐ Designation of Agent
☐ Designation of Operator ☐ Operator Name Change Only

The operator of the well(s) listed below has changed, **effective:** 11-1-99

TO: (new operator)	ROBERT L. BAYLESS, PROD LLC	**FROM:** (old operator)	PETRAL EXPLORATION LLC
(address)	P.O. BOX 168	(address)	P.O. BOX 5083
	FARMINGTON, NM 87499		DENVER, CO 80217-5083
	Phone: (505) 326-2659		Phone: (303) 832-3131
	Account no. N7950		Account no. N7700

WELL(S) attach additional page if needed: ***KNOCKDHU UNIT**

Name: KNOCKDHU UNIT 2 (PGW)	API: 43-037-31779	Entity: 12111	S 33	T 37S	R 25E	Lease: UTU-65915
Name: SHANE FED. 1 (SGW)	API: 43-037-31406	Entity: 10999	S 7	T 37S	R 24E	Lease: UTU-39243
Name: DALMORE-FED. 1-A (PGW)	API: 43-037-31786	Entity: 12098	S 26	T 37S	R 23E	Lease: UTU-041085
Name: KNOCKDHU UNIT 3 (PGW)	API: 43-037-31785	Entity: 11890	S 33	T 37S	R 25E	Lease: UTU-75521
Name: ~~KNOCKDHU UNIT 4 (PGW)~~	API: ~~43-037-31788~~	Entity: ~~11890~~	S ~~33~~	T ~~37S~~	R ~~25E~~	Lease: ~~UTU-75521~~
Name: KNOCKDHU UNIT 1 (PGW)	API: 43-037-31773	Entity: 11890	S 33	T 37S	R 25E	Lease: UTU-65915
Name:	API:	Entity:	S	T	R	Lease:

OPERATOR CHANGE DOCUMENTATION

LDR 1. (r649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator (attach to this form). (Rec'd 11-12-99)

LDR 2. (r649-8-10) Sundry or other legal documentation has been received from the **NEW** operator (Attach to this form). (Rec'd 11-12-99)

N/A 3. The **Department of Commerce** has been contacted if the new operator above is not currently operating any wells in Utah. Is the company **registered with the state?** (yes/no) _____ If yes, show company file number: _____.

LDR 4. **FOR INDIAN AND FEDERAL WELLS ONLY.** The BLM has been contacted regarding this change. Make note of BLM status in comments section of this form. BLM approval of **Federal** and **Indian** well operator changes should ordinarily take place prior to the division's approval, and before the completion of **steps 5 through 9** below. (Rec'd 11-18-99) (Rec'd 12-13-99)

LDR 5. Changes have been entered in the **Oil and Gas Information System** (3270) for each well listed above. (11-24-99) → 3 wells (1-20-2000 → 2 wells Knockdhu unit)

LDR 6. **Cardex** file has been updated for each well listed above.

N/A 7. Well **file labels** have been updated for each well listed above.

LDR 8. Changes have been included on the monthly "Operator, Address, and Account Changes" **memo** for distribution to Trust Lands, Sovereign Lands, UGS, Tax Commission, etc. (11-24-99 * 3 wells) (1-21-2000 2 wells Knockdhu unit)

LDR 9. A folder has been set up for the **Operator Change file**, and a copy of this page has been placed there for reference during routing and processing of the original documents.

OPERATOR CHANGE WORKSHEET (contir 1) - Initial each item when completed. Write N/A if item is not applicable.

ENTITY REVIEW

KDR 1. (r649-8-7) **Entity assignments have been reviewed** for all wells listed above. Were entity changes made? (yes/no) ____ If entity assignments were changed, attach copies of Form 6, Entity Action Form.

KDR 2. Trust Lands, Sovereign Lands, Tax Commission, etc., have been **notified** through normal procedures of entity changes.

BOND VERIFICATION - (FEE WELLS ONLY)

N/A 1. (r649-3-1) The **NEW** operator of any fee lease well listed above has furnished a proper bond.

2. A **copy of this form** has been placed in the new and former operator's bond files.

3. The **FORMER** operator has requested a release of liability from their bond (yes/no) _____, as of today's date _____. If yes, division response was made to this request by letter dated _____.

LEASE INTEREST OWNER NOTIFICATION OF RESPONSIBILITY

N/A 1. Copies of documents have been sent on _____ to _____ at Trust Lands for changes involving State leases, in order to remind that agency of their responsibility to review for proper bonding.

2. (r649-2-10) The former operator of any fee lease wells listed above has been contacted and informed by letter dated _____ 19 __, of their responsibility to notify all interest owners of this change.

FILMING

KDR 1. All attachments to this form have been **microfilmed**. Today's date: 13 April 2000.

FILING

1. **Copies** of all attachments to this form have been filed in each **well file**.

2. The **original of this form**, and the **original attachments** are now being filed in the Operator Change file.

COMMENTS

991124 called Robert L. Bayless to see which acct # wells are to be put under. Per Robert L. Bayless, Producer LLC, they are to be under N7950.
991124 called Teresa Thompson in SL. Blm office to see if approval for Knockdhu #1. She said as of today no paperwork filed. Called Robert L. Bayless (Tom McCarthy) and let them know they needed to file w/ SL Blm office because well is in an unit. Gave him Teresa's name & number for info.